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=> s matrix
L1     1556074 MATRIX

=> s l1 and soluble
L2       45242 L1 AND SOLUBLE

=> s l2 and embedded
L3        1167 L2 AND EMBEDDED

=> s l3 and impregnate?
L4           5 L3 AND IMPREGNATE?

=> s l4 and tolerance
L5           0 L4 AND TOLERANCE

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PROCESSING COMPLETED FOR L4
L6           5 DUP REMOVE L4 (0 DUPLICATES REMOVED)

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L7           3 L6 AND PD<20040304

=> d l7 1-3 cbib abs

L7   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
2005:20779   Document No. 143:46787  Shape fabrication of cotton-derived
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inorganic ultralight hollow ribbons. Bourlinos, Athanasios B.; Bakandritsos, Aristeides; Pedridis, Dimitris (Inst. of Mater. Sci., NCSR Demokritos, Athens, 15310, Greece). Materials Research Innovations, 8(4), 168-169 (English) 2004. CODEN: MRINFV. ISSN: 1432-8917. Publisher: Matrice Technology Ltd..

AB Cellulose acts as a simple and effective structural mold for the fabrication of various inorg. hollow ribbons, including metal oxides of diverse functions and elemental metal particles. More specifically, the surface patterning of cellulose-based cotton ribbons with suitable inorg. precursors through hydrolysis, sol-gel, co-precipitation, ion-exchange, and chemical modification reactions, followed by calcination of the as-made cotton derivs. in an inert atmospheric or in air, leads to a wide range of ultralight hollow inorg. materials, like metals, ceramics (CeO_2, MgO, SiO_2), semiconducting (α-Fe_2O_3, SnO_2, TiO_2), magnetic (γ-Fe_2O_3, Co_3O_4) and others ($NdFeO_3$), that inherit the morphol., dimensions, and macroscopic appearance of the parent cotton template. The first step in the fabrication of hollow inorg. ribbons involves the attachment of simple inorg. precursors to the cellulose framework such as metal cations or metal alkoxides, via ion exchange, hydrolysis, sol-gel, and precipitation reactions. Calcination in air produces metal oxide hollow ribbons. To produce hollow ribbons of Fe, Co, Ni metals embedded in a carbonaceous matrix, the cellulose, impregnated with metal nitrates, was subjected to a thermal treatment in a stream of diluted H_2. Of particular interest is the morphogenesis of magnetic hollow ribbons of γ-Fe_2O_3 and its effect on its magnetic properties. It is shown that a SEM image of γ-Fe_2O_3 hollow ribbons. The effect of the ribbon-like morphol. on the magnetic properties of the hollow γ-Fe_2O_3 ribbons could be of particular interest taking into consideration the significance of magnetic iron oxides in various applications. To this aim, we recorded the magnetization vs. applied field curves at room temperature for the γ-Fe_2O_3 hollow ribbons and powdered γ-Fe_2O_3 as a blank sample, the latter being prepared under identical conditions but in the absence of cotton. Therefore, while γ-Fe_2O_3 hollow ribbons and blank samples exhibit identical XRD patterns and mean particle sizes, the hollow ribbons show a considerably lower saturation magnetization (Ms = 13 emu g-1) than the powdered sample (Ms = 70 emu g-1). The reduced magnetization can be attributed to the porous structure of the hollow ribbons and, in turn, to the lower particle d. and volume packing. Currently similar morphogenesis processes using hair fibers as templates are underway.

L7 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

1989:180184 Document No. 110:180184 Catalyst for oxidation of hydrocarbon compounds. Baiker, Alfons; Gasser, Daniel (Lonza A.-G., Switz.). Eur. Pat. Appl. EP 299485 A1 19890118, 11 pp. DESIGNATED STATES: R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE. (German). CODEN: EPXXDW. APPLICATION: EP 1988-111336 19880714. PRIORITY: CH 1987-2685 19870714.

AB The title catalysts are described by the general formula Pdx(ZrOz)y, where x is a number between 1 and 99, y = 100-x, and z = 0.5-2. Catalysts having a Pd content of 0.2-20 weight%, formed by impregnation of ZrO_2 with a water-soluble Pd salt or a complexed Pd salt, drying of the impregnated ZrO_2 and reduction of the Pd complex with H_2, are also described. The catalysts may be prepared by activation of a PdxZry alloy (x, y as above) in a gas stream containing reactants (in situ activation) or in an O_2-containing gas stream at 150-350°. Use of the catalysts at temps. between room temperature and 350° and pressures between normal pressure and 10 bars for the total oxidation of CO, aliphatic hydrocarbons, aliphatic alcs., and aromatic hydrocarbons is described. A Pd33Zr67 alloy was oxidized by exposure to a $N_2/O_2/CO$ gas mixture to produce a catalytic material which x-ray studies revealed consisted of Pd particles embedded in a Zr oxide matrix. The catalyst was used for the oxidation of CO to CO_2.

L7 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
1988:100050 Document No. 108:100050 Refractory composite bodies. Partridge, Graham; Hyde, Andrew Richard; Haines, John Kenneth (General Electric Co. PLC, UK). Brit. UK Pat. Appl. GB 2190929 A 19871202, 5 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1987-10317 19870430. PRIORITY: GB 1986-10552 19860430.

AB The title refractories consist of glass-ceramic, glass, ceramic, or C fiber embedded in a refractory matrix, and are prepared by coating the fiber with a sol, winding it onto a mandrel, and heat-treating the composite mass to give a gel and finally a refractory matrix. The resulting article may be used as an insulator or a mech. member, e.g., a cylinder liner. The sol is prepared by hydrolysis of an alkoxide or a salt of the appropriate metal, from various forms of SiO2, or from a silane. By using a mandrel of square cross section, flat laminate can be produced which are plied together to give multilayer, multiangle or unidirectional reinforced composite. A tow of continuous SiC fibers was dip-infiltrated with a 1:3 Si(OEt)4-EtSi(OEt)3-based sol, then wound onto a 40 + 6 cm rotating mandrel with a 70° winding angle pattern; a structure was produced 4 patterns thick. The structure was air-dried 3 days, then heat-treated to 150° over 5 days at 30°/day, cooled, removed from the mandrel, and machined into 15 mm-long rings which were heat-treated at 1200° for 1 h under N. Reimpregnation and heat treatment at 1200° in N gave structures with apparent tensile strength (ATS) 20 MPa after 4 treatments. A similar composite containing C fibers had ATS 91 MPa.

=> s soluble matrix
L8 1118 SOLUBLE MATRIX

=> s l8 and silane
L9 2 L8 AND SILANE

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L10 2 DUP REMOVE L9 (0 DUPLICATES REMOVED)

=> d l10 1-2 cbib abs

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
2005:975659 Document No. 143:254039 Formulation of leukocyte-stimulation matrixes for vaccination and the determination of T-cell subtypes. Scholz, Martin (Leukocare GmbH, Germany). Eur. Pat. Appl. EP 1571204 A1 20050907, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK. (German). CODEN: EPXXDW. APPLICATION: EP 2004-5177 20040304.

AB The invention concerns leukocyte-stimulation matrix and/or the induction of immunotolerance by using (a) one or more carriers; (b) a soluble matrix for embedding one or more components for leukocyte-stimulation and/or induction of immunotolerance; (c) one or more components for leukocyte-stimulation and/or induction of immunotolerance that are embedded in the soluble matrix. Further ingredients are coupling agents for binding the carrier with the components for leukocyte-stimulation and/or induction of immunotolerance. Typical stimulating agents are antigens, MHC antigens, cell debris, viruses, etc. Polyurethane, polystyrene, and medical metals, glasses, natural products are the carriers. As coupling agents bromocyan, agarose, silane, etc. are used; matrixes are starch, cellulose, glycogen, polyethylene glycol.

L10 ANSWER 2 OF 2 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

2001:188264 The Genuine Article (R) Number: 403NY. Chemical deposition of conducting polymers. Malinauskas A (Reprint). Inst Chem Vilnius, Gostauto Str 9, LT-2600 Vilnius, Lithuania (Reprint); Inst Chem Vilnius, LT-2600 Vilnius, Lithuania. POLYMER (APR 2001) Vol. 42, No. 9, pp. 3957-3972. ISSN: 0032-3861. Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB The coating of different materials with conducting electroactive polymers (CEP), i.e. polyaniline, polypyrrole, polythiophene, and their derivatives, provided by means of chemical polymerization, is briefly reviewed. The topics covered include the deposition of CEP (i) by bulk oxidative chemical polymerization, (ii) by surface-located polymerization, and (iii) by coating of micro- and nanoparticles. The coating of different materials like polymers, polymer particles, ion-exchange membranes, glass, fiber, textile, soluble matrices, inorganic materials is reviewed. The literature reviewed covers a 5-year period, beginning from 1995. (C) 2001 Elsevier Science Ltd. All rights reserved.

=> s l3 and antigen
L11 40 L3 AND ANTIGEN

=> s l11 and stimulate leukocyte
L12 0 L11 AND STIMULATE LEUKOCYTE

=> s l11 and induction of tolerance
4 FILES SEARCHED...
L13 0 L11 AND INDUCTION OF TOLERANCE

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2 FILES SEARCHED...
L15 36 L11 AND PD<20040304

=> d l15 1-36 cbib abs

L15 ANSWER 1 OF 36 MEDLINE on STN

2004483763. PubMed ID: 15451458. Human-compatible collagen matrix for prolonged and reversible systemic delivery of erythropoietin in mice from gene-modified marrow stromal cells. Eliopoulos Nicoletta; Lejeune Laurence; Martineau Daniel; Galipeau Jacques. (Lady Davis Institute for Medical Research, Jewish General Hospital, McGill University, Montreal, Quebec H3T 1E2, Canada.) Molecular therapy : the journal of the American Society of Gene Therapy, (2004 Oct) Vol. 10, No. 4, pp. 741-8. Journal code: 100890581. ISSN: 1525-0016. Pub. country: United States. Language: English.

AB Bone marrow stromal cells (MSCs) can be exploited therapeutically in transgenic cell therapy approaches. Our aim was to determine if gene-modified MSCs sequestered within a clinically approved, bovine type I collagen-based viscous bulking material could serve as a retrievable implant for systemic delivery of erythropoietin (Epo). To test this hypothesis, we embedded Epo-secreting MSCs in viscous collagen (Contigen) and determined the pharmacological effect following implantation in normal mice. Primary MSCs from C57Bl/6 mice were retrovirally engineered to express murine Epo (mEpo) and 10(7) cells of a clonal population secreting 3 U of mEpo/10(6) cells/24 h were implanted

subcutaneously in normal C57Bl/6 mice with and without viscous collagen. Without matrix support, Hct rose to >70% for <25 days and returned to baseline by 60 days. However, in mice implanted with viscous collagen-embedded MSCs, the Hct rose to >70% up to 203 days postimplantation ($P < 0.0001$). In parallel, plasma Epo concentration was significantly increased ($P < 0.05$) for >145 days. Moreover, surgical removal of the viscous collagen organoid 24 days after implantation led to reduction of Hct to baseline levels within 14 days. In conclusion, this investigation demonstrates that mEpo(+) MSCs embedded in a human-compatible viscous collagen matrix offers a potent, durable, and reversible approach for delivery of plasma-soluble therapeutic proteins.

L15 ANSWER 2 OF 36 MEDLINE on STN

2003386719. PubMed ID: 12921619. An experimental study on the difference of the antigenicity of xenogenic acellular dermal matrix. Jiang Du-yin; Chen Bi; Jia Chi-yu; Tao Ke. (Department of Burns, Xijing Hospital, The Fourth Military Medical University, Xi'an 710032, Shaanxi Province, PR China.) Zhonghua shao shang za zhi = Zhonghua shaoshang zazhi = Chinese journal of burns, (2003 Jun) Vol. 19, No. 3, pp. 155-8. Journal code: 100959418. ISSN: 1009-2587. Pub. country: China. Language: Chinese.

AB OBJECTIVE: To investigate the difference of the antigenicity of xenogenic acellular dermal matrix (ADM) implants prepared by different methods. METHODS: The split-thickness skin sheet from swine was processed by trypsin and Triton X-100 to make xeno-ADM. Twenty-five Japanese white rabbits were divided into 5 groups, i.e. xeno-ADM(1) (conjugated with glutaradehyde), xeno-ADM(2) (conjugated with network) and xeno-ADM(3) (no conjugation, as control), in which the ADMs were and xeno-ADM(4) (conjugated) and allo-ADM (no conjugated as control), in which the ADMs were embedded into the subcutaneous place of rabbit ear and back after that the rabbits were pre-sensitized by xeno-ADM soluble protein antigen injections. The titers of anti ADMs antibody in rabbit serum were monitored during 2 - 32 post-operative weeks and the histological changes of the embedded ADMs were observed grossly and microscopically. RESULTS: The serum titers of anti-xeno-ADM in xeno-ADM(4) group was the highest. Whereas regardless of the sensitizing effects, the titers in all groups ranged as follows: xeno-ADM(3) > xeno-ADM(2) > xeno-ADM(1) ($P < 0.05 - 0.01$). About 40% serum samples in allo-ADM group exhibited positive anti-allo-ADM protein antibodies. Histologically, Evident and lasting inflammatory reaction could be found in the xeno-ADM grafting sites, which was much stronger than that in allo-ADM group. The degradation and absorption gradient of ADM was ranked as follow: xeno-ADM(3) > xeno-ADM(2) > xeno-ADM(4) > xeno-ADM(1) > Allo-ADM. Foreign body megalocytic reaction might evoke in the surrounding of conjugated ADM. CONCLUSION: The immunogenicity in xeno-ADM was stronger than that in allo-ADM, which could induce the host to develop immune reaction restricted by IgG. Large sheets of degenerated ADM implants could lower down the antigen-antibody reaction and ameliorate the structural destroying and degeneration absorption of ADM induced by inflammatory immune reaction.

L15 ANSWER 3 OF 36 MEDLINE on STN

2003262377. PubMed ID: 12788385. Focal complex formation in adult cardiomyocytes is accompanied by the activation of beta3 integrin and c-Src. Willey Christopher D; Balasubramanian Sundaravadivel; Rodriguez Rosas Maria C; Ross Robert S; Kuppuswamy Dhandapani. (Cardiology Division, Department of Medicine, Gazes Cardiac Research Institute, Medical University of South Carolina, 114 Doughty Street, SC 29425 2221, Charleston, USA.) Journal of molecular and cellular cardiology, (2003 Jun) Vol. 35, No. 6, pp. 671-83. Journal code: 0262322. ISSN: 0022-2828. Pub. country: England: United Kingdom. Language: English.

AB In pressure-overloaded myocardium, our recent study demonstrated cytoskeletal assembly of c-Src and other signaling proteins which was partially mimicked in vitro using adult feline cardiomyocytes embedded in three-dimensional (3D) collagen matrix and stimulated with an integrin-binding Arg-Gly-Asp (RGD) peptide. In the present study, we improved this model further to activate c-Src and obtain a full assembly of the focal adhesion complex (FAC), and characterized c-Src localization and integrin subtype(s) involved. RGD dose response experiments revealed that c-Src activation occurs subsequent to its cytoskeletal recruitment and is accompanied by p130Cas cytoskeletal binding and focal adhesion kinase (FAK) Tyr925 phosphorylation. When cardiomyocytes expressing hexahistidine-tagged c-Src via adenoviral gene delivery were used for RGD stimulation, the expressed c-Src exhibited relocation: (i) biochemical analysis revealed c-Src movement from the detergent-soluble to the -insoluble cytoskeletal fraction and (ii) confocal microscopic analysis showed c-Src movement from a nuclear/perinuclear to a sarcolemmal region. RGD treatment also caused sarcolemmal co-localization of FAK and vinculin. Characterization of integrin subtypes revealed that beta3, but not beta1, integrin plays a predominant role: (i) expression of cytoplasmic domain of beta1A integrin did not affect the RGD-stimulated FAC formation and (ii) both pressure-overloaded myocardium and RGD-stimulated cardiomyocytes exhibited phosphorylation of beta3 integrin at Tyr773/785 sites but not beta1 integrin at Thr788/789 sites. Together these data indicate that RGD treatment in cardiomyocytes causes beta3 integrin activation and c-Src sarcolemmal localization, that subsequent c-Src activation is accompanied by p130Cas binding and FAK Tyr925 phosphorylation, and that these events might be crucial for growth and remodeling of hypertrophying adult cardiomyocytes.

L15 ANSWER 4 OF 36 MEDLINE on STN

1999419271. PubMed ID: 10487832. Vascular channel formation by human melanoma cells in vivo and in vitro: vasculogenic mimicry. Maniotis A J; Folberg R; Hess A; Seftor E A; Gardner L M; Pe'er J; Trent J M; Meltzer P S; Hendrix M J. (Department of Anatomy, University of Iowa Cancer Center, University of Iowa College of Medicine, Iowa City, USA.) The American journal of pathology, (1999 Sep) Vol. 155, No. 3, pp. 739-52. Journal code: 0370502. ISSN: 0002-9440. Pub. country: United States. Language: English.

AB Tissue sections from aggressive human intraocular (uveal) and metastatic cutaneous melanomas generally lack evidence of significant necrosis and contain patterned networks of interconnected loops of extracellular matrix. The matrix that forms these loops or networks may be solid or hollow. Red blood cells have been detected within the hollow channel components of this patterned matrix histologically, and these vascular channel networks have been detected in human tumors angiographically. Endothelial cells were not identified within these matrix-embedded channels by light microscopy, by transmission electron microscopy, or by using an immunohistochemical panel of endothelial cell markers (Factor VIII-related antigen, Ulex, CD31, CD34, and KDR[Flk-1]). Highly invasive primary and metastatic human melanoma cells formed patterned solid and hollow matrix channels (seen in tissue sections of aggressive primary and metastatic human melanomas) in three-dimensional cultures containing Matrigel or dilute Type I collagen, without endothelial cells or fibroblasts. These tumor cell-generated patterned channels conducted dye, highlighting looping patterns visualized angiographically in human tumors. Neither normal melanocytes nor poorly invasive melanoma cells generated these patterned channels in vitro under identical culture conditions, even after the addition of conditioned medium from metastatic pattern-forming melanoma cells, soluble growth factors, or regimes of hypoxia. Highly invasive and metastatic human melanoma cells,

but not poorly invasive melanoma cells, contracted and remodeled floating hydrated gels, providing a biomechanical explanation for the generation of microvessels in vitro. cDNA microarray analysis of highly invasive versus poorly invasive melanoma tumor cells confirmed a genetic reversion to a pluripotent embryonic-like genotype in the highly aggressive melanoma cells. These observations strongly suggest that aggressive melanoma cells may generate vascular channels that facilitate tumor perfusion independent of tumor angiogenesis.

L15 ANSWER 5 OF 36 MEDLINE on STN

1998253277. PubMed ID: 9591052. Assembly of basement membrane in vitro by cooperation between alveolar epithelial cells and pulmonary fibroblasts. Furuyama A; Kimata K; Mochitate K. (Environmental Health Sciences Division, National Institute for Environmental Studies, Ibaraki, Japan.. kawagoe@nies.go.jp) . Cell structure and function, (1997 Dec) Vol. 22, No. 6, pp. 603-14. Journal code: 7608465. ISSN: 0386-7196. Pub. country: Japan. Language: English.

AB To investigate basement membrane formation by cooperation between pneumocytes and pulmonary fibroblasts, we cultured type II alveolar epithelial cells obtained from rats transfected with SV40-large T antigen gene (SV40-T2 cells) on type I collagen matrices . On fibroblasts-embedded gel (T2-Fgel), SV40-T2 cells ultrastructurally formed a continuous and thin layer of lamina densa, while on collagen gel without fibroblasts (T2-gel) SV40-T2 cells produced only discontinuous and diffuse deposits. Stripping SV40-T2 cells off the tissues by H2O2 treatment revealed a continuous and plane surface of lamina densa assembled on the T2-Fgel tissue, whereas only amorphous deposits appeared on the T2-gel tissue. Immunolocalization of major basement membrane components showed that type IV collagen, laminin, perlecan and entactin (nidogen) were continuously integrated on the lamina densa in T2-Fgel. In T2-gel, all these components were discontinuously distributed beneath SV40-T2 cells. The contribution of pulmonary fibroblasts to the assembly of basement membrane through reorganization of collagen matrix and/or soluble factors was examined by the cultured of SV40-T2 cells on the freeze-thawed fibroblast-tissue and/or with the fibroblast-conditioned medium. Both SV40-T2 cells on the freeze-thawed fibroblast-tissue and SV40-T2 cells in T2-gel in the fibroblast-conditioned medium failed to produce a lamina densa. SV40-T2 cells could assemble a lamina densa only on the freeze-thawed fibroblast-tissue in the fibroblast-conditioned medium. These results show that the basement membrane components are assembled to a lamina densa by combination of the reorganization of collagen matrix and the supply of soluble factors by pulmonary fibroblasts.

L15 ANSWER 6 OF 36 MEDLINE on STN

97232489. PubMed ID: 9075637. Improved immunohistochemical staining of osteopontin (OPN) in paraffin-embedded archival bone specimens following antigen retrieval: anti-human OPN antibody recognizes multiple molecular forms. Devoll R E; Pinero G J; Appelbaum E R; Dul E; Troncoso P; Butler W T; Farach-Carson M C. (Department of Basic Sciences, The University of Texas-Houston, Health Science Center, Dental Branch, 6516 John Freeman Avenue, Houston, Texas 77030, USA.) Calcified tissue international, (1997 Apr) Vol. 60, No. 4, pp. 380-6. Journal code: 7905481. ISSN: 0171-967X. Pub. country: United States. Language: English.

AB Studies to assess osteopontin (OPN) localization in adult human bone using immunochemical techniques produce conflicting results due to variations in tissue processing or antibody immunoreactivity. The present study was designed to resolve these discrepancies using well-characterized antibodies and improved antigen detection. An anti-osteopontin (alpha-OPN) antiserum was developed that recognizes various soluble molecular weight forms of human OPN, including monomeric,

cleaved, and dimerized products. An affinity column of full length recombinant human OPN (rOPN) coupled to support was used to purify alpha-OPN antibodies. Western analysis showed that the affinity-purified antibodies recognized numerous molecular weight forms of OPN. These antibodies were used to study the distribution of OPN in adult human bone using immunohistochemical techniques combined with an antigen retrieval protocol utilizing a newly developed antigen retrieval solution, Retriev-Alltrade mark (Bronco Technologies Inc, Pasadena, TX). Immunolocalization of OPN in archival bone specimens prior to antigen retrieval produced no demonstrable immunostaining even at high concentrations of alpha-OPN. Use of the antigen retrieval protocol restored OPN immunoreactivity, with strong staining apparent in cement lines, osteoblasts, osteocytes, canaliculi, osteoid, and bone matrix. We conclude that antigen retrieval restores immunochemical recognition of OPN in archival specimens containing bone without increasing nonspecific binding.

L15 ANSWER 7 OF 36 MEDLINE on STN

96257896. PubMed ID: 8658052. Fibronectin co-stimulates via the alpha 5 beta 1 receptor IL-2, IL-4 production by splenic, granuloma lymphocytes of Schistosoma mansoni infected mice. Zhu Y; Boros D L. (Department of Immunology and Microbiology, Wayne State University School of Medicine, Detroit, MI, USA.) Scandinavian journal of immunology, (1996 Jun) Vol. 43, No. 6, pp. 633-9. Journal code: 0323767. ISSN: 0300-9475. Pub. country: ENGLAND: United Kingdom. Language: English.

AB In murine Schistosomiasis mansoni, soluble worm egg antigens (SEA) induce L3T4+ T helper cell-mediated chronic granulomatous inflammations around parasite eggs. Within the fully developed granuloma lymphocytes, macrophages, and eosinophils, fibroblasts are embedded in extracellular matrix (ECM) composed of fibronectin, laminin, glycosaminoglycans and collagens. The present study examined in vitro the putative co-stimulatory role of fibronectin (FN) in acute and chronic infection splenic and granuloma lymphocyte responses. Plate-bound FN enhanced the anti-CD3 MoAb stimulated normal and acute or chronic infection splenic lymphoproliferation by 20-32%. The co-stimulatory effect was evident in SEA stimulated acute but not chronic infection spleen cells. Proliferation of stimulated granuloma lymphocytes could not be up-regulated by immobilized FN. Plate-bound FN significantly enhanced IL-2 and IL-4 production by SEA-stimulated acute, but not chronic, infection granuloma lymphocytes. However, FN had no influence on the high level of IL-2, IL-4 production of anti-CD3 MoAb stimulated acute or chronic infection splenic or granuloma lymphocytes. Because in the antigen-stimulated acute infection spleen or granuloma cultures the co-stimulatory effect by FN was abrogated by the tripeptide (RGD) arg-gly asp, and anti alpha 5 beta 1 antibody, enhancement is attributed to signalling via the alpha 5 beta 1 integrin receptor of lymphocytes.

L15 ANSWER 8 OF 36 MEDLINE on STN

87139125. PubMed ID: 2434559. Usefulness of the immunogold technique in quantitation of a soluble protein in ultra-thin sections. Posthuma G; Slot J W; Geuze H J. The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society, (1987 Apr) Vol. 35, No. 4, pp. 405-10. Journal code: 9815334. ISSN: 0022-1554. Pub. country: United States. Language: English.

AB We used a model system to study whether measurements of absolute local antigen concentrations at the electron microscopic level are feasible by counting immunogold labeling density in ultra-thin sections. The model system consisted of a matrix of a variable concentration of gelatin, which was mixed with given concentrations of rat pancreas amylase and fixed according to various fixation protocols. With a relatively mild fixation, there was no clear proportionality between anti-amylase gold labeling and amylase concentration in ultra-thin

cryosections. This was presumably due to uncontrolled loss of amylase from the sections. After stronger fixation with 2% glutaraldehyde for 4 hr, labeling density reflected the amylase concentration very well. We observed that matrix (gelatin) density influenced labeling density. A low gelatin concentration of 5% allowed penetration of immunoreagents into the cryosection, resulting in a high and variable labeling density. In gelatin concentrations of 10% and 20%, labeling density was lower but proportional to amylase concentration. To establish an equal (minimal) penetration of immunoreagents, we embedded model blocks with different matrix densities in polyacrylamide (PAA). In ultra-thin cryosections of these PAA-embedded blocks, anti-amylase labeling was proportional to amylase concentration even at a low (5%) gelatin concentration. Anti-amylase labeling in ultra-thin sections from Lowicryl K4M low temperature-embedded blocks was higher than in PAA sections, but the results were less consistent and depended to some extent on matrix density. These results, together with the earlier observation that acrylamide completely penetrates intracellular compartments (Slot JW, Geuze HJ: Biol Cell 44:325, 1982), demonstrate that it is possible to measure true intracellular concentrations of soluble proteins in situ using ultra-thin cryosections of PAA-embedded tissue.

L15 ANSWER 9 OF 36 MEDLINE on STN

86195103. PubMed ID: 3486171. Electron microscopic immunocytochemistry of interstitial retinol-binding protein in vertebrate retinas. Schneider B G; Papermaster D S; Liou G I; Fong S L; Bridges C D. Investigative ophthalmology & visual science, (1986 May) Vol. 27, No. 5, pp. 679-88. Journal code: 7703701. ISSN: 0146-0404. Pub. country: United States. Language: English.

AB Interstitial retinol binding protein (IRBP) is a soluble glycoprotein found in the interphotoreceptor matrix (IPM) and implicated in shuttling retinol between retina and pigment epithelium (PE) cells. The authors have studied the distribution of IRBP by EM immunocytochemistry. Thin sections of Lowicryl K4M embedded R. pipiens, X. laevis, bovine and human retinas were labeled sequentially with affinity purified rabbit antibovine IRBP, biotinyl-sheep antirabbit F(Ab')2, and avidin-ferritin, or with avidin and biotinyl-ferritin. Antigen was in the interphotoreceptor space and intercalated into the narrow spaces between PE cell microvilli. IRBP penetration between PE cells was delimited abruptly by the PE junctional complexes. IRBP was also observed in small vacuoles in the apical cytoplasm of PE cells and in PE cell phagosomes that contained IRBP surrounding ingested rod tips. IPM was heavily but inhomogeneously labeled. Antigen was usually deposited along the ROS and COS plasma membrane in a confluent layer, but sometimes it was distributed in large (ca. 0.2-micron thick) clumps. In bovine and human retinas, the connecting cilium was ensheathed by antigen at high density but an unlabeled halo surrounded its plasma membrane. The apical plasma membrane of the inner segment aligned along the connecting cilium was also densely coated by antigen. In both frog retinas, the ridges of the periciliary ridge complex (PRC) were coated with antigen. In none of the four species examined was Golgi labeling present. In bovine retinas, labeled vacuoles (granules) in the myoid region were found in very low numbers (15 vacuoles in 358 rod cells). Amphibian retinas also contained only small numbers of myoid vacuoles labeled by anti-IRBP. Absence of antibody binding to intracellular sites of synthesis in any of the cells that abut the interphotoreceptor matrix suggests that the antigen may be masked prior to its release from the synthetic cell(s) or that its level is below limits of detection.

L15 ANSWER 10 OF 36 MEDLINE on STN

80007478. PubMed ID: 90071. Development of a new primary fixative for

electron microscopic immunocytochemical localization of intracellular antigens in cultured cells. Willingham M C; Yamada S S. The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society, (1979 May) Vol. 27, No. 5, pp. 947-60. Journal code: 9815334. ISSN: 0022-1554. Pub. country: United States. Language: English.

AB We have developed a new primary fixative that permits the localization of intracellular antigens with well preserved ultrastructural morphology. This primary fixation method employs a mixture of a water soluble carbodiimide with glutaraldehyde, and preserves morphology, yet produces a permeable cytosol matrix so that antibodies can gain access to fixed proteins. Cultured cells were primarily fixed, treated with detergent to permeabilize their membranes, reacted with peroxidase labeled antibodies, secondarily fixed, and embedded in situ. The variations in morphology and accessibility of intracellular antigens were evaluated for a variety of fixatives. Concanavalin A and alpha 2 macroglobulin were chosen as examples of intracellular protein antigens to evaluate these fixation methods. Both of the proteins were localized in intracellular vesicles.

L15 ANSWER 11 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

1999318172 EMBASE Vascular channel formation by human melanoma cells in vivo and in vitro: Vasculogenic mimicry. Maniotis A.J.; Folberg R.; Hess A.; Seftor E.A.; Gardner L.M.G.; Pe'er J.; Trent J.M.; Meltzer P.S.; Hendrix M.J.C.. Dr. M.J.C. Hendrix, Dept. of Anatomy and Cell Biology, College of Medicine, University of Iowa, Iowa City, IA 52242-1109, United States. mary-hendrix@uiowa.edu. American Journal of Pathology Vol. 155, No. 3, pp. 739-752 Sep 1999.
Refs: 52.
ISSN: 0002-9440. CODEN: AJPAA4
Pub. Country: United States. Language: English. Summary Language: English.
Entered STN: 19990927. Last Updated on STN: 19990927

AB Tissue sections from aggressive human intraocular (uveal) and metastatic cutaneous melanomas generally lack evidence of significant necrosis and contain patterned networks of interconnected loops of extracellular matrix. The matrix that forms these loops or networks may be solid or hollow. Red blood cells have been detected within the hollow channel components of this patterned matrix histologically, and these vascular channel networks have been detected in human tumors angiographically. Endothelial cells were not identified within these matrix-embedded channels by light microscopy, by transmission electron microscopy, or by using an immunohistochemical panel of endothelial cell markers (Factor VIII-related antigen, Ulex, CD31, CD34, and KDR[Flk-1]). Highly invasive primary and metastatic human melanoma cells formed patterned solid and hollow matrix channels (seen in tissue sections of aggressive primary and metastatic human melanomas) in three-dimensional cultures containing Matrigel or dilute Type I collagen, without endothelial cells or fibroblasts. These tumor cell-generated patterned channels conducted dye, highlighting looping patterns visualized angiographically in human tumors. Neither normal melanocytes nor poorly invasive melanoma cells generated these patterned channels in vitro under identical culture conditions, even after the addition of conditioned medium from metastatic pattern-forming melanoma cells, soluble growth factors, or regimes of hypoxia. Highly invasive and metastatic human melanoma cells, but not poorly invasive melanoma cells, contracted and remodeled floating hydrated gels, providing a biomechanical explanation for the generation of microvessels in vitro, cDNA microarray analysis of highly invasive versus poorly invasive melanoma tumor cells confirmed a genetic reversion to a pluripotent embryonic-like genotype in the highly aggressive melanoma

cells. These observations strongly suggest that aggressive melanoma cells may generate vascular channels that facilitate tumor perfusion independent of tumor angiogenesis.

L15 ANSWER 12 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

1998084813 EMBASE Assembly of basement membrane in vitro by cooperation between alveolar epithelial cells and pulmonary fibroblasts. Furuyama A.; Kimata K.; Mochitate K.. A. Furuyama, Environmental Health Sciences Div., Natl. Inst. Environmental Studies, 16-2 Onogawa, Tsukuba, Ibaraki 305, Japan. Cell Structure and Function Vol. 22, No. 6, pp. 603-614 Dec 1997.
Refs: 30.
ISSN: 0386-7196. CODEN: CSFUDY
Pub. Country: Japan. Language: English. Summary Language: English.
Entered STN: 19980402. Last Updated on STN: 19980402

AB To investigate basement membrane formation by cooperation between pneumocytes and pulmonary fibroblasts, we cultured type II alveolar epithelial cells obtained from rats transfected with SV40-large T antigen gene (SV40-T2 cells) on type I collagen matrices . On fibroblasts-embedded gel (T2-Fgel), SV40-T2 cells ultrastructurallly formed a continuous and thin layer of lamina densa, while on collagen gel without fibroblasts (T2-gel) SV40-T2 cells produced only discontinuous and diffuse deposits. Stripping SV40-T2 cells off the tissues by H(2)O(2) treatment revealed a continuous and plane surface of lamina densa assembled on the T2-Fgel tissue, whereas only amorphous deposits appeared on the T2-gel tissue. Immunolocalization of major basement membrane components showed that type IV collagen, laminin, perlecan and entactin (nidogen) were continuously integrated on the lamina densa in T2-Fgel. In T2-gel, all these components were discontinuously distributed beneath SV40-T2 cells. The contribution of pulmonary fibroblasts to the assembly of basement membrane through reorganization of collagen matrix and/or soluble factors was examined by the cultured of SV40-T2 cells on the freeze-thawed fibroblast-tissue and/or with the fibroblast-conditioned medium. Both SV40-T2 cells on the freeze-thawed fibroblast-tissue and SV40-T2 cells in T2-gel in the fibroblast-conditioned medium failed to produce a lamina densa. SV40-T2 cells could assemble a lamina densa only on the freeze-thawed fibroblast-tissue in the fibroblast-conditioned medium. These results show that the basement membrane components are assembled to a lamina densa by combination of the reorganization of collagen matrix and the supply of soluble factors by pulmonary fibroblasts.

L15 ANSWER 13 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

1997099987 EMBASE Improved immunohistochemical staining of osteopontin (OPN) in paraffin- embedded archival bone specimens following antigen retrieval: Anti-human OPN antibody recognizes multiple molecular forms. Devoll R.E.; Pinero G.J.; Appelbaum E.R.; Dul E.; Troncoso P.; Butler W.T.; Farach-Carson M.C.. R.E. Devoll, Dental Branch, Health Science Center, University of Texas-Houston, 6516 John Freeman Avenue, Houston, TX 77030, United States. Calcified Tissue International Vol. 60, No. 4, pp. 380-386 Apr 1997.
Refs: 25.
ISSN: 0171-967X. CODEN: CTINDZ
Pub. Country: United States. Language: English. Summary Language: English.
Entered STN: 970422. Last Updated on STN: 970422

AB Studies to assess osteopontin (OPN) localization in adult human bone using immunochemical techniques produce conflicting results due to variations in tissue processing or antibody immunoreactivity. The present study was designed to resolve these discrepancies using wellcharacterized antibodies and improved antigen detection. An anti-osteopontin

(α-OPN) antiserum was developed that recognizes various soluble molecular weight forms of human OPN, including monomeric, cleaved, and dimerized products. An affinity column of full length recombinant human OPN (rOPN) coupled to support was used to purify α-OPN antibodies. Western analysis showed that the affinity-purified antibodies recognized numerous molecular weight forms of OPN. These antibodies were used to study the distribution of OPN in adult human bone using immunohistochemical techniques combined with an antigen retrieval protocol utilizing a newly developed antigen retrieval solution, Retriev- All(TM) (Bronco Technologies Inc, Pasadena, TX). Immunolocalization of OPN in archival bone specimens prior to antigen retrieval produced no demonstrable immunostaining even at high concentrations of α-OPN. Use of the antigen retrieval protocol restored OPN immunoreactivity, with strong staining apparent in cement lines, osteoblasts, osteocytes, canaliculi, osteoid, and bone matrix. We conclude that antigen retrieval restores immunochemical recognition of OPN in archival specimens containing bone without increasing nonspecific binding.

L15 ANSWER 14 OF 36 EMBASE

1996159691 EMBASE Fibronectin Co-stimulates via the α(5)β(1) receptor IL-2, IL-4 production by splenic, granuloma lymphocytes of Schistosoma mansoni infected mice. Zhu Y.; Boros D.L.. Dr. D.L. Boros, Department Immunology/Microbiology, Wayne State Univ. School Medicine, 540 E. Canfield Avenue, Detroit, MI 48201, United States. Scandinavian Journal of Immunology Vol. 43, No. 6, pp. 633-639 1996.

Refs: 35.
ISSN: 0300-9475. CODEN: SJIMAX
Pub. Country: United Kingdom. Language: English. Summary Language: English.
Entered STN: 960624. Last Updated on STN: 960624

AB In murine Schistosomiasis mansoni, soluble worm egg antigens (SEA) induce L3T4(+) T helper cell-mediated chronic granulomatous inflammations around parasite eggs. Within the fully developed granuloma lymphocytes, macrophages, and eosinophils, fibroblasts are embedded in extracellular matrix (ECM) composed of fibronectin, laminin, glycosaminoglycans and collagens. The present study examined ill vitro the putative co-stimulatory role of fibronectin (FN) in acute and chronic infection splenic and granuloma lymphocyte responses. Plate-bound FN enhanced the anti-CD3 MoAb stimulated normal and acute or chronic infection splenic lymphoproliferation by 20-32%. The costimulatory effect was evident in SEA stimulated acute but not chronic infection spleen cells. Proliferation of stimulated granuloma lymphocytes could not be up-regulated by immobilized FN. Plate-bound FN significantly enhanced IL-2 and IL-4 production by SEA-stimulated acute, but not chronic, infection granuloma lymphocytes. However, FN had no influence on the high level of IL-2, IL-4 production of anti-CD3 MoAb stimulated acute or chronic infection splenic or granuloma lymphocytes. Because in the antigen-stimulated acute infection spleen or granuloma cultures the co-stimulatory effect by FN was abrogated by the tripeptide (RGD) arg-gly asp, and anti α(5)β(1) antibody, enhancement is attributed to signalling via the α(5)β(1) integrin receptor of lymphocytes.

L15 ANSWER 15 OF 36 EMBASE

1994350321 EMBASE Immunocytochemical detection of actin and 53 kDa polypeptide in the epididymal spermatozoa of rat and mouse. Paranko J.; Yagi A.; Kuusisto M.. J. Paranko, Department of Anatomy, University of Turku, 20520 Turku, Finland. Anatomical Record Vol. 240, No. 4, pp. 516-527 1994.

ISSN: 0003-276X. CODEN: ANREAK
Pub. Country: United States. Language: English. Summary Language: English.
Entered STN: 941214. Last Updated on STN: 941214

AB Background: Presence of immunocytochemically detectable actin in the rat and mouse sperm head has been enigmatic for years. In this study, we demonstrate actin in the perinuclear theca and show that the detection of actin epitopes in the rat and mouse epididymal spermatozoa can effectively be enhanced by pre-extraction of sperm cells with SDS. Methods: The study with one monoclonal and one polyclonal anti-actin antibody was carried out at conventional and confocal fluorescence and electron microscope level, and by immunoblotting of proteins isolated from the head and tail fractions. Results: In the head of the control methanol-acetone fixed rat spermatozoa, the polyclonal antibody gave a stronger immunostaining in the postacrosomal area and in the perforatorium than the monoclonal antibody. In the mouse sperm head, the monoclonal antibody labeled the ventral edge of the postacrosomal area and slightly the perforatorium, whereas the polyclonal antibody stained the entire perinuclear space. In the SDS-extracted spermatozoa, an intense postacrosomal and perforatorial labeling was obtained with both antibodies but, in particular in the rat spermatozoa, the middle lateral portion of the postacrosomal segment remained unlabeled. Sonication seemed to cause structural modifications which specifically impeded staining with the monoclonal antibody. Both antibodies detected actin in the basal plate and the monoclonal antibody in the neck. Amorphous matrix of the connecting piece showed immunogold labeling. In the tail, the monoclonal antibody recognized actin and a relatively basic 53 kDa polypeptide, whereas the polyclonal antibody reacted with several protein bands. SDS-soluble actin of the tail was addressed to the midpiece and the SDS-insoluble 53 kDa protein profoundly to the outer dense fibers of the principal piece. Conclusions: Intense labeling of actin in the SDS-extracted rat and mouse spermatozoa was presumably due to the generated demasking of actin epitopes embedded in the perinuclear cytoplasm. The results are important in confirming that actin in the rat and mouse sperm head is not lost during spermiogenesis but apparently contributes to the three-dimensional packing of the mature perinuclear cytoplasm. This study further demonstrates the importance of the methods used in sample preparation and advantages of confocal microscopy when attempting to detect cytoskeletal proteins which, as in spermatozoa, may occur in small quantities.

L15 ANSWER 16 OF 36 EMBASE

1991290574 EMBASE Immunogold electron microscopy of soluble proteins: Localization of Bet v I major allergen in ultra-thin sections of birch pollen after anhydrous fixation techniques. Grote M.. M. Grote, Institute of Medical Physics, Munster University, Hufferstr. 68, D-4400 Munster, Germany. Journal of Histochemistry and Cytochemistry Vol. 39, No. 10, pp. 1395-1401 1991.
ISSN: 0022-1554. CODEN: JHCYAS
Pub. Country: United States. Language: English. Summary Language: English.
Entered STN: 911216. Last Updated on STN: 911216

AB To localize the highly water-soluble major allergen Bet v I in ultra-thin sections of birch pollen, pollen grains were cracked, air-dried, and processed for electron microscopy using one of the following preparation techniques: fixation in aqueous p-formaldehyde + cetylpyridinium chloride; fixation in p-formaldehyde vapor; fixation in benzoquinone vapor; inert dehydration; or no fixation. Afterwards the pollen grains were embedded in Lowicryl K4M resin at low temperature. Ultra-thin sections were cut and incubated with a monoclonal antibody against Bet v I, followed by a gold-labeled secondary antibody. In some experiments, commercial rabbit IgG antibodies against birch pollen allergens were also used, followed by incubation with the protein A-gold

complex. Bet v I could be localized only after vapor fixation and in the inert dehydrated specimens. Best preservation of ultrastructure and antigenicity was obtained after p-formaldehyde vapor fixation. Bet v I antibody binding sites were detected only in the cytoplasmic matrix of the pollen grain, never in the pollen wall. Commercial rabbit antibodies bound to cytoplasm and wall of all prepared specimens, even after aqueous fixation. This might be explained by the assumption that these antibodies recognize a variety of antigenic and allergenic structures, not all of which are so highly soluble as Bet v I.

L15 ANSWER 17 OF 36 EMBASE

1986159545 EMBASE Electron microscopic immunocytochemistry of interstitial retinol-binding protein in vertebrate retinas. Schneider B.G.; Papermaster D.S.; Liou G.I.; et. al.. Department of Pathology, Yale Medical School, VA Medical Center, West Haven, CT, United States. Investigative Ophthalmology and Visual Science Vol. 27, No. 5, pp. 679-688 1986.
ISSN: 0146-0404. CODEN: IOVSDA
Pub. Country: United States. Language: English.
Entered STN: 911210. Last Updated on STN: 911210

AB Interstitial retinol binding protein (IRBP) is a soluble glycoprotein found in the interphotoreceptor matrix (IPM) and implicated in shuttling retinol between retina and pigment epithelium (PE) cells. The authors have studied the distribution of IRBP by EM immunocytochemistry. Thin sections of Lowicryl K4M embedded R. pipiens, X. laevis, bovine and human retinas were labeled sequentially with affinity purified rabbit antibovine IRBP, biotinyl-sheep antirabbit F(Ab')(2), and avidin-ferritin, or with avidin and biotinyl-ferritin. Antigen was in the interphotoreceptor space and intercalated into the narrow spaces between PE cell microvilli. IRBP penetration between PE cells was delimited abruptly by the PE junctional complexes. IRBP was also observed in small vacuoles in the apical cytoplasm of PE cells and in PE cell phagosomes that contained IRBP surrounding ingested rod tips. IPM was heavily but inhomogeneously labeled. Antigen was usually deposited along the ROS and COS plasma membrane in a confluent layer, but sometimes it was distributed in large (ca. 0.2-μm thick) clumps. In bovine and human retinas, the connecting cilium was ensheathed by antigen at high density but an unlabeled halo surrounded its plasma membrane. The apical plasma membrane of the inner segment aligned along the connecting cilium was also densely coated by antigen. In both frog retinas, the ridges of the periciliary ridge complex (PRC) were coated with antigen. In none of the four species examined was Golgi labeling present. In bovine retinas, labeled vacuoles (granules) in the myoid region were found in very low numbers (15 vacuoles in 358 rod cells). Amphibian retinas also contained only small numbers of myoid vacuoles labeled by anti-IRBP. Absence of antibody binding to intracellular sites of synthesis in any of the cells that abut the interphotoreceptor matrix suggests that the antigen may be masked prior to its release from the synthetic cell(s) or that its level is below limits of detection.

L15 ANSWER 18 OF 36 EMBASE

1979196773 EMBASE Development of a new primary fixative for electron microscopic immunocytochemical localization of intracellular antigens in cultured cells. Willingham M.C.; Yamada S.S.. Lab. Molec. Biol., Nat. Cancer Inst., Bethesda, Md. 20205, United States. Journal of Histochemistry and Cytochemistry Vol. 27, No. 5, pp. 947-960 1979.
ISSN: 0022-1554. CODEN: JHCYAS
Pub. Country: United States. Language: English.

AB We have developed a new primary fixative that permits the localization of

intracellular antigens with well preserved ultrastructural morphology. This primary fixation method employs a mixture of a water soluble carbodiimide with glutaraldehyde, and preserves morphology, yet produces a permeable cytosol matrix so that antibodies can gain access to fixed proteins. Cultured cells were primarily fixed, treated with detergent to permeabilize their membranes, reacted with peroxidase labeled antibodies, secondarily fixed, and embedded in situ. The variations in morphology and accessibility of intracellular antigens were evaluated for a variety of fixatives. Concanavalin A and $\alpha(2)$ macroglobulin were chosen as examples of intracellular protein antigens to evaluate these fixation methods. Both of the proteins were localized in intracellular vesicles.

L15 ANSWER 19 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1997:204770 Document No.: PREV199799503973. Improved immunohistochemical staining of osteopontin (OPN) in paraffin-embedded archival bone specimens following antigen retrieval: Anti-human OPN antibody recognizes multiple molecular forms. Devoll, R. E. [Reprint author]; Pinero, G. J.; Appelbaum, E. R.; Dul, E.; Troncoso, P.; Butler, W. T.; Farach-Carson, M. C.. Dep. Basic Sci., Univ. Texas-Houston, Health Sci. Cent., Dental Branch, 6516 John Freeman Ave., Houston, TX 77030, USA. Calcified Tissue International, (1997) Vol. 60, No. 4, pp. 380-386.
CODEN: CTINDZ. ISSN: 0171-967X. Language: English.

AB Studies to assess osteopontin (OPN) localization in adult human bone using immunochemical techniques produce conflicting results due to variations in tissue processing or antibody immunoreactivity. The present study was designed to resolve these discrepancies using well characterized antibodies and improved antigen detection. An anti-osteopontin (alpha-OPN) antiserum was developed that recognizes various soluble molecular weight forms of human OPN, including monomeric, cleaved, and dimerized products. An affinity column of full length recombinant human OPN (rOPN) coupled to support was used to purify alpha-OPN antibodies. Western analysis showed that the affinity-purified antibodies recognized numerous molecular weight forms of OPN. These antibodies were used to study the distribution of OPN in adult human bone using immunohistochemical techniques combined with an antigen retrieval protocol utilizing a newly developed antigen retrieval solution, Retriev-All (Bronco Technologies Inc, Pasadena, TX). Immunolocalization of OPN in archival bone specimens prior to antigen retrieval produced no demonstrable immunostaining even at high concentrations of alpha-OPN. Use of the antigen retrieval protocol restored OPN immunoreactivity, with strong staining apparent in cement lines, osteoblasts, osteocytes, canaliculi, osteoid, and bone matrix. We conclude that antigen retrieval restores immunochemical recognition of OPN in archival specimens containing bone without increasing nonspecific binding.

L15 ANSWER 20 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1996:333042 Document No.: PREV199699055398. Fibronectin co-stimulates via the alpha-5-beta-1 receptor IL-2, IL-4 production by splenic, granuloma lymphocytes of Schistosoma mansoni infected mice. Zhu, Y.; Boros, D. L. [Reprint author]. Dep. Immunol. Microbiol., Wayne State Univ., Sch. Med., 540 E. Canfield Ave., Detroit, MI 48201, USA. Scandinavian Journal of Immunology, (1996) Vol. 43, No. 6, pp. 633-639.
CODEN: SJIMAX. ISSN: 0300-9475. Language: English.

AB In murine Schistosomiasis mansoni, soluble worm egg antigens (SEA) induce L3T4+ T helper cell-mediated chronic granulomatous inflammations around parasite eggs. Within the fully

developed granuloma lymphocytes, macrophages, and eosinophils, fibroblasts are embedded in extracellular matrix (ECM) composed of fibronectin, laminin, glycosaminoglycans and collagens. The present study examined in vitro the putative co-stimulatory role of fibronectin (FN) in acute and chronic infection splenic and granuloma lymphocyte responses. Plate-bound FN enhanced the anti-CD3 MoAb stimulated normal and acute or chronic infection splenic lymphoproliferation by 20-32%. The costimulatory effect was evident in SEA stimulated acute but not chronic infection spleen cells. Proliferation of stimulated granuloma lymphocytes could not be up-regulated by immobilized FN. Plate-bound FN significantly enhanced IL-2 and IL-4 production by SEA-stimulated acute, but not chronic, infection granuloma lymphocytes. However, FN had no influence on the high level of IL-2, IL-4 production of anti-CD3 MoAb stimulated acute or chronic infection splenic or granuloma lymphocytes. Because in the antigen-stimulated acute infection spleen or granuloma cultures the co-stimulatory effect by FN was abrogated by the tripeptide (RGD) arg-gly asp, and anti alpha-5-beta-1 antibody, enhancement is attributed to signalling via the alpha-5-beta-1 integrin receptor of lymphocytes.

L15 ANSWER 21 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1987:229939 Document No.: PREV198783118109; BA83:118109. USEFULNESS OF THE IMMUNOGOLD TECHNIQUE IN QUANTITATION OF A SOLUBLE PROTEIN IN ULTRA-THIN SECTIONS. POSTHUMA G [Reprint author]; SLOT J W; GEUZE H J. LAB CELL BIOLOGY, MED FAC, UNIV UTRECHT, NIC BEETSSTRAAT 22, 3511 HG UTRECHT, THE NETHERLANDS. Journal of Histochemistry and Cytochemistry, (1987) Vol. 35, No. 4, pp. 405-410.
CODEN: JHCYAS. ISSN: 0022-1554. Language: ENGLISH.

AB We used a model system to study whether measurements of absolute local antigen concentrations at the electron microscopic level are feasible by counting immunogold labeling density in ultra-thin sections. The model system consisted of a matrix of a variable concentration of gelatin, which was mixed with given concentrations of rat pancreas amylase and fixed according to various fixation protocols. With a relatively mild fixation, there was no clear proportionality between anti-amylase gold labeling and amylase concentration in ultra-thin cryosections. This was presumably due to uncontrolled loss of amylase from the sections. After stronger fixation with 2% glutaraldehyde for 4 hr, labeling density reflected the amylase concentration very well. We observed that matrix (gelatin) density influenced labeling density. A low gelatin concentration of 5% allowed penetration of immunoreagents into the cryosection, resulting in a high and variable labeling density. In gelatin concentrations of 10% and 20%, labeling density was lower but proportional to amylase concentration. To establish an equal (minimal) penetration of immunoreagents, we embedded model blocks with different matrix densities in polyacrylamide (PAA). In ultra-thin cryosections of these PAA-embedded blocks, anti-amylase labeling was proportional to amylase concentration even at a low (5%) gelatin concentration. Anti-amylase labeling in ultra-thin sections from Lowicryl K4M low temperature-embedded blocks was higher than in PAA sections, but the results were less consistent and depended to some extent on matrix density. These results, together with the earlier observation that acrylamide completely penetrates intracellular compartments (Slot JW, Gueze HJ: Biol Cell 44:325, 1982), demonstrate that it is possible to measure true intracellular concentrations of soluble proteins in situ using ultra-thin cryosections of PAA-embedded tissue.

L15 ANSWER 22 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1986:344579 Document No.: PREV198682058783; BA82:58783. ELECTRON MICROSCOPIC IMMUNOCYTOCHEMISTRY OF INTERSTITIAL RETINOL-BINDING PROTEIN IN VERTEBRATE

RETINAS. SCHNEIDER B G [Reprint author]; PAPERMASTER D S; LIOU G I; FONG S-L; BRIDGES C D. DEP PATHOL, UNIV TEXAS HEALTH SCI CENT, 7703 FLOYD CURL DRIVE, SAN ANTONIO, TEX 78284, USA. Investigative Ophthalmology and Visual Science, (1986) Vol. 27, No. 5, pp. 679-688.
CODEN: IOVSDA. ISSN: 0146-0404. Language: ENGLISH.

AB Interstitial retinol binding protein (IRBP) is a soluble glycoprotein found in the interphotoreceptor matrix (IPM) and implicated in shuttling retinol between retina and pigment epithelium (PE) cells. The authors have studied the distribution of IRBP by EM immunocytochemistry. Thin sections of Lowicryl K4M embedded Rana pipiens, Xenopus laevis, bovine and human retinas were labeled sequentially with affinity purified rabbit antibovine IRBP, biotinyl-sheep antirabbit F(Ab')2, and avidin-ferritin, or with avidin and biotinyl-ferritin. Antigen was in the interphotoreceptor space and intercalated into the narrow spaces between PE cell microvilli. IRBP penetration between PE cells was delimited abruptly by the PE junctional complexes. IRBP was also observed in small vacuoles in the apical cytoplasm of PE cells and in PE phagosomes that contained IRBP surrounding ingested rod tips. IPM was heavily but inhomogeneously labeled. Antigen was usually deposited along the ROS and COS plasma membrane in a confluent layer, but sometimes it was distributed in large (ca. 0.2-μm thick) clumps. In bovine and human retinas, the connecting cilium was ensheathed by antigen at high density but an unlabeled halo surrounded its plasma membrane. The apical plasma membrane of the inner segment aligned along the connecting cilium was also densely coated by antigen. In both frog retinas, the ridges of the periciliary ridge complex (PRC) were coated with antigen. In none of the four species examined was Golgi labeling present. In bovine retinas, labeled vacuoles (granules) in the myoid region were found in very low numbers (15 vacuoles in 358 rod cells). Amphibian retinas also contained only small numbers of myoid vacuoles labeled by anti-IRBP. Absence of antibody binding to intracellular sites of synthesis in any of the cells that abut the interphotoreceptor matrix suggests that the antigen may be masked prior to its release from the synthetic cell(s) or that its level is below limits of detection.

L15 ANSWER 23 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1979:266041 Document No.: PREV197968068545; BA68:68545. DEVELOPMENT OF A NEW PRIMARY FIXATIVE FOR ELECTRON MICROSCOPIC IMMUNO CYTOCHEMICAL LOCALIZATION OF INTRA CELLULAR ANTIGENS IN CULTURED CELLS. WILLINGHAM M C [Reprint author]; YAMADA S S. LAB MOL BIOL, NATL CANCER INST, BETHESDA, MD 20205, USA. Journal of Histochemistry and Cytochemistry, (1979) Vol. 27, No. 5, pp. 947-960.
CODEN: JHCYAS. ISSN: 0022-1554. Language: ENGLISH.

AB A new primary fixative was developed that permits the localization of intracellular antigens while preserving ultrastructural morphology. This primary fixation method employs a mixture of a H2O soluble carbodiimide with glutaraldehyde which preserves morphology, yet produces a permeable cytosol matrix so that antibodies can bind to fixed proteins. Cultured [Swiss mouse 3T3 fibroblast] cells were primarily fixed, treated with detergent to permeabilize their membranes, reacted with peroxidase-labeled antibodies, secondarily fixed, and embedded in situ. The variations in morphology and accessibility of intracelluar antigens were evaluated for a variety of fixatives. Concanavalin A and [human] α2 macroglobulin were chosen as examples of intracellular protein antigens to evaluate these fixation methods. Both proteins were localized in intracellular vesicles.

L15 ANSWER 24 OF 36 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1999:694147 The Genuine Article (R) Number: 235JD. Vascular channel formation by human melanoma cells in vivo and in vitro: Vasculogenic mimicry. Maniotis A J; Folberg R; Hess A; Seftor E A; Gardner L M G; Pe'er J; Trent J M; Meltzer P S; Hendrix M J C (Reprint). Univ Iowa, Coll Med, Dept Anat & Cell Biol, Iowa City, IA 52242 USA (Reprint); Univ Iowa, Ctr Canc, Dept Anat, Iowa City, IA USA; Univ Iowa, Ctr Canc, Dept Cell Biol, Iowa City, IA USA; Univ Iowa, Coll Med, Dept Ophthalmol & Visual Sci, Iowa City, IA USA; Univ Iowa, Coll Med, Dept Pathol, Iowa City, IA USA; Hadassah Univ Hosp, Dept Ophthalmol, IL-91120 Jerusalem, Israel; Natl Human Genome Res Inst, Canc Genet Branch, NIH, Bethesda, MD USA. AMERICAN JOURNAL OF PATHOLOGY (SEP 1999) Vol. 155, No. 3, pp. 739-752. ISSN: 0002-9440. Publisher: AMER SOC INVESTIGATIVE PATHOLOGY, INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3993 USA. Language: English.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Tissue sections from aggressive human intraocular (uveal) and metastatic cutaneous melanomas generally lack evidence of significant necrosis and contain patterned networks of interconnected loops of extracellular matrix. The matrix that forms these loops or networks may be solid or hollow. Red blood cells have been detected within the hollow channel components of this patterned matrix histologically, and these vascular channel networks have been detected in human tumors angiographically, Endothelial cells were not identified within these matrix-embedded channels by light microscopy, by transmission electron microscopy, or by using an immunohistochemical panel of endothelial cell markers (Factor VIII-related antigen, Ulex, CD31, CD34, and KDR[Flk-1]). Highly invasive primary and metastatic human melanoma cells formed patterned solid and hollow matrix channels (seen in tissue sections of aggressive primary and metastatic human melanomas) in three-dimensional cultures containing Matrigel or dilute Type I collagen, without endothelial cells or fibroblasts. These tumor cell-generated patterned channels conducted dye, highlighting looping patterns visualized angiographically in human tumors. Neither normal melanocytes nor poorly invasive melanoma cells generated these patterned channels in vitro under identical culture conditions, even after the addition of conditioned medium from metastatic pattern-forming melanoma cells, soluble growth factors, or regimes of hypoxia, Highly invasive and metastatic human melanoma cells, but clot poorly invasive melanoma cells, contracted and remodeled floating hydrated gels, providing a biomechanical explanation for the generation of microvessels in vitro. cDNA microarray analysis of highly invasive versus poorly invasive melanoma tumor cells confirmed a genetic reversion to a pluripotent embryonic-like genotype in the highly aggressive melanoma cells. These observations strongly suggest that aggressive melanoma cells may generate vascular channels that facilitate tumor perfusion independent of tumor angiogenesis.

L15 ANSWER 25 OF 36 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1998:162281 The Genuine Article (R) Number: YY727. Assembly of basement membrane in vitro by cooperation between alveolar epithelial cells and pulmonary fibroblasts. Furuyama A (Reprint); Kimata K; Mochitate K. Natl Inst Environm Studies, Environm Hlth Sci Div, 16-2 Onogawa, Ibaraki, Osaka 305, Japan (Reprint); Natl Inst Environm Studies, Environm Hlth Sci Div, Ibaraki, Osaka 305, Japan; Aichi Med Univ, Inst Mol Sci Med, Aichi 48011, Japan. CELL STRUCTURE AND FUNCTION (DEC 1997) Vol. 22, No. 6, pp. 603-614. ISSN: 0386-7196. Publisher: JAPAN SOC CELL BIOLOGY, SHIMOTACHIURI OGAWA-HIGASHI, KAMIKYOKU KYOTO, 602, JAPAN. Language: English.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB To investigate basement membrane formation by cooperation between pneumocytes and pulmonary fibroblasts, we cultured type II alveolar epithelial cells obtained from rats transfected with SV40-large T

antigen gene (SV40-T2 cells) on type I collagen matrices . On fibroblasts-embedded gel (T2-Fgel), SV40-T2 cells ultrastructurally formed a continuous and thin layer of lamina densa, while on collagen gel without fibroblasts (T2-gel) SV40-T2 cells produced only discontinuous and diffuse deposits. Stripping SV40-T2 cells off the tissues by H2O2 treatment revealed a continuous and plane surface of lamina densa assembled on the T2-Fgel tissue, whereas only amorphous deposits appeared on the T2-gel tissue. Immunolocalization of major basement membrane components showed that type IV collagen, laminin, perlecan and entactin (nidogen) were continuously integrated on the lamina densa in T2-Fgel. In T2-gel, all these components were discontinuously distributed beneath SV40-T2 cells. The contribution of pulmonary fibroblasts to the assembly of basement membrane through reorganization of collagen matrix and/or soluble factors was examined by the cultured of SV40-T2 cells on the freeze-thawed fibroblast-tissue and/or with the fibroblast-conditioned medium. Both SV40-T2 cells on the freeze-thawed fibroblast-tissue and SV40-T2 cells in T2-gel in the fibroblast-conditioned medium failed to produce a lamina densa. SV40-T2 cells could assemble a lamina densa only on the freeze-thawed fibroblast-tissue in the fibroblast-conditioned medium. These results show that the basement membrane components are assembled to a lamina densa by combination of the reorganization of collagen matrix and the supply of soluble Factors by pulmonary fibroblasts.

L15 ANSWER 26 OF 36 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1997:236097 The Genuine Article (R) Number: WN565. Improved immunohistochemical staining of osteopontin (OPN) in paraffin-embedded archival bone specimens following antigen retrieval: Anti-human OPN antibody recognizes multiple molecular forms. Devoll R E (Reprint); Pinero G J; Appelbaum E R; Dul E; Troncoso P; Butler W T; FarachCarson M C. UNIV TEXAS, HLTH SCI CTR, DEPT BASIC SCI, DENT BRANCH, 6516 JOHN FREEMAN AVE, HOUSTON, TX 77030 (Reprint); SMITHKLINE BEECHAM PHARMACEUT, DEPT GENE EXPRESS SCI, KING OF PRUSSIA, PA 19406; UNIV TEXAS, MD ANDERSON CANC CTR, DEPT PATHOL, HOUSTON, TX 77030. CALCIFIED TISSUE INTERNATIONAL (APR 1997) Vol. 60, No. 4, pp. 380-386. ISSN: 0171-967X. Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010. Language: English.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Studies to assess osteopontin (OPN) localization in adult human bone using immunochemical techniques produce conflicting results due to variations in tissue processing or antibody immunoreactivity. The present study was designed to resolve these discrepancies using well-characterized antibodies and improved antigen detection. An anti-osteopontin (alpha-OPN) antiserum was developed that recognizes various soluble molecular weight forms of human OPN, including monomeric, cleaved, and dimerized products. An affinity column of full length recombinant human OPN (rOPN) coupled to support was used to purify alpha-OPN antibodies. Western analysis showed that the affinity-purified antibodies recognized numerous molecular weight forms of OPN. These antibodies were used to study the distribution of OPN in adult human bone using immunohistochemical techniques combined with an antigen retrieval protocol utilizing a newly developed antigen retrieval solution, Retriev-All(TM) (Bronco Technologies Inc, Pasadena, TX). Immunolocalization of OPN in archival bone specimens prior to antigen retrieval produced no demonstrable immunostaining even at high concentrations of alpha-OPN. Use of the antigen retrieval protocol restored OPN immunoreactivity, with strong staining apparent in cement lines, osteoblasts, osteocytes, canaliculi, osteoid, and bone matrix. We conclude that antigen retrieval restores immunochemical recognition of OPN in archival specimens containing bone without increasing nonspecific binding.

L15 ANSWER 27 OF 36 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1996:410104 The Genuine Article (R) Number: UN044. Fibronectin co-stimulates via the alpha(5)beta(1) receptor IL-2, IL-4 production by splenic, granuloma lymphocytes of Schistosoma mansoni infected mice. Zhu Y (Reprint); Boros D L. WAYNE STATE UNIV, SCH MED, DEPT IMMUNOL & MICROBIOL, DETROIT, MI 48201. SCANDINAVIAN JOURNAL OF IMMUNOLOGY (JUN 1996) Vol. 43, No. 6, pp. 633-639. ISSN: 0300-9475. Publisher: BLACKWELL SCIENCE LTD, OSNEY MEAD, OXFORD, OXON, ENGLAND OX2 0EL. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB In murine Schistosomiasis mansoni, soluble worm egg antigens (SEA) induce L3T4(+) T helper cell-mediated chronic granulomatous inflammations around parasite eggs. Within the fully developed granuloma lymphocytes, macrophages, and eosinophils, fibroblasts are embedded in extracellular matrix (ECM) composed of fibronectin, laminin, glycosaminoglycans and collagens. The present study examined in vitro the putative co-stimulatory role of fibronectin (FN) in acute and chronic infection splenic and granuloma lymphocyte responses. Plate-bound FN enhanced the anti-CD3 MoAb stimulated normal and acute or chronic infection splenic lymphoproliferation by 20-32%. The co-stimulatory effect was evident in SEA stimulated acute but not chronic infection spleen cells. Proliferation of stimulated granuloma lymphocytes could not be up-regulated by immobilized FN. Plate-bound FN significantly enhanced IL-2 and IL-4 production by SEA-stimulated acute, but not chronic, infection granuloma lymphocytes. However, FN had no influence on the high level of IL-2, IL-4 production of anti-CD3 MoAb stimulated acute or chronic infection splenic or granuloma lymphocytes. Because in the antigen-stimulated acute infection spleen or granuloma cultures the co-stimulatory effect by FN was abrogated by the tripeptide (RGD) arg-gly asp, and anti alpha(5) beta(1) antibody, enhancement is attributed to signalling via the alpha(5) beta(1) integrin receptor of lymphocytes.

L15 ANSWER 28 OF 36 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1994:213718 The Genuine Article (R) Number: NE054. IMMUNOLOGICAL DETECTION OF THE CELLULAR RECEPTOR FOR UROKINASE PLASMINOGEN-ACTIVATOR. MIZUKAMI I F (Reprint); GARNIWAGNER B A; DEANGELO L M; LIEBERT M; FLINT A; LAWRENCE D A; COHEN R L; TODD R F. UNIV MICHIGAN, SCH MED, SIMPSON MEM INST, ANN ARBOR, MI 48109; UNIV MICHIGAN, SCH MED, DEPT INTERNAL MED, ANN ARBOR, MI 48109; UNIV MICHIGAN, SCH MED, DEPT SURG, ANN ARBOR, MI 48109; UNIV MICHIGAN, SCH MED, DIV UROL, ANN ARBOR, MI 48109; UNIV MICHIGAN, SCH MED, DEPT PATHOL, ANN ARBOR, MI 48109; UNIV CALIF SAN FRANCISCO, CANC RES INST, SAN FRANCISCO, CA 94143; UNIV MICHIGAN, CTR MED, SCH MED, DIV HEMATOL & ONCOL, TAUBMAN CTR 3119N, ANN ARBOR, MI 48109. CLINICAL IMMUNOLOGY AND IMMUNOPATHOLOGY (APR 1994) Vol. 71, No. 1, pp. 96-104. ISSN: 0090-1229. Publisher: ACADEMIC PRESS INC JNL-COMP SUBSCRIPTIONS, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB The cellular receptor for urokinase plasminogen activator (uPA-R) is a monomeric phosphatidylinositol-linked glycoprotein (gp40-65) that may contribute to the invasive capacity of tumor and inflammatory cells by focusing the activity of urokinase (uPA) in converting plasminogen to plasmin, a serine protease capable of degrading extracellular matrix proteins. The further characterization of uPA-R has been facilitated by our recent development of a monoclonal antibody, anti-Mo3f, specific for uPA-R. This mAb bound to uPA-R expressed by phorbol myristate acetate-stimulated U-937 cells and by NIH-3T3 cells permanently transfected with uPA-R cDNA. In competitive binding assays, anti-Mo3f inhibited the binding of fluorescein-conjugated uPA ligand to uPA-R expressed by U-937 cells and uPA-R transfectants; conversely, preexposure of cells to saturating quantities of exogenous uPA partially blocked the

subsequent binding of anti-Mo3f mAb to uPA-R. Anti-Mo3f mAb was employed as the capture reagent in an ELISA for the quantitation of soluble forms of uPA-R (derived from U-937 cells and recombinant uPA-R) which had a sensitivity of approximately 4-12 ng/ml. Anti-Mo3f mAb was also applied as a serologic probe for the detection of uPA-R expressed by human tumor tissues. By immunoperoxidase staining, anti-Mo3f demonstrated positive tumor cell staining in 4 of 16 breast and 7 of 31 prostate carcinomas in formalin-fixed, paraffin-embedded specimens. These data indicate that the anti-Mo3f mAb detects an epitope proximate to or within the ligand binding domain (domain 1) of uPA-R and may be useful as a tool for the serologic detection of uPA-R in soluble form or associated with human tumors. (C) 1994 Academic Press, Inc.

L15 ANSWER 29 OF 36 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1991:538182 The Genuine Article (R) Number: GG127. IMMUNOGOLD ELECTRON-MICROSCOPY OF SOLUBLE-PROTEINS - LOCALIZATION OF BET-V-I MAJOR ALLERGEN IN ULTRA-THIN SECTIONS OF BIRCH POLLEN AFTER ANHYDROUS FIXATION TECHNIQUES. GROTE M (Reprint). UNIV MUNSTER, INST MED PHYS, HUFFERSTR 68, W-4400 MUNSTER, GERMANY (Reprint). JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY (OCT 1991) Vol. 39, No. 10, pp. 1395-1401. ISSN: 0022-1554. Publisher: HISTOCHEMICAL SOC INC, MT SINAI MEDICAL CENTER 19 EAST 98TH ST SUTIE 9G, NEW YORK, NY 10029. Language: English.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB To localize the highly water-soluble major allergen Bet v I in ultra-thin sections of birch pollen, pollen grains were cracked, air-dried, and processed for electron microscopy using one of the following preparation techniques: fixation in aqueous p-formaldehyde + cetylpyridinium chloride; fixation in p-formaldehyde vapor; fixation in benzoquinone vapor; inert dehydration; or no fixation. Afterwards the pollen grains were embedded in Lowicryl K4M resin at low temperature. Ultra-thin sections were cut and incubated with a monoclonal antibody against Bet v I, followed by a gold-labeled secondary antibody. In some experiments, commercial rabbit IgG antibodies against birch pollen allergens were also used, followed by incubation with the protein A-gold complex. Bet v I could be localized only after vapor fixation and in the inert dehydrated specimens. Best preservation of ultrastructure and antigenicity was obtained after p-formaldehyde vapor fixation. Bet v I antibody binding sites were detected only in the cytoplasmic matrix of the pollen grain, never in the pollen wall. Commercial rabbit antibodies bound to cytoplasm and wall of all prepared specimens, even after aqueous fixation. This might be explained by the assumption that these antibodies recognize a variety of antigenic and allergenic structures, not all of which are so highly soluble as Bet v I.

L15 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN

2004:788986 Document No. 142:140931 Human-compatible collagen matrix for prolonged and reversible systemic delivery of erythropoietin in mice from gene-modified marrow stromal cells. Eliopoulos, Nicoletta; Lejeune, Laurence; Martineau, Daniel; Galipeau, Jacques (Lady Davis Institute for Medical Research, McGill University, Jewish General Hospital, Montreal, QC, H3T 1E2, Can.). Molecular Therapy, 10(4), 741-748 (English) 2004. CODEN: MTOHCK. ISSN: 1525-0016. Publisher: Elsevier.

AB Bone marrow stromal cells (MSCs) can be exploited therapeutically in transgenic cell therapy approaches. The authors' aim was to determine if gene-modified MSCs sequestered within a clin. approved, bovine type I collagen-based viscous bulking material could serve as a retrievable implant for systemic delivery of erythropoietin (Epo). To test this hypothesis, the authors embedded Epo-secreting MSCs in viscous collagen (Contigen) and determined the pharmacol. effect following implantation in normal mice. Primary MSCs from C57Bl/6 mice were retrovirally

engineered to express murine Epo (mEpo) and 107 cells of a clonal population secreting 3 U of mEpo/106 cells/24 h were implanted s.c. in normal C57Bl/6 mice with and without viscous collagen. Without matrix support, Hct rose to >70% for <25 days and returned to baseline by 60 days. However, in mice implanted with viscous collagen-embedded MSCs, the Hct rose to >70% up to 203 days postimplantation ($P < 0.0001$). In parallel, plasma Epo concentration was significantly increased ($P < 0.05$) for >145 days. Moreover, surgical removal of the viscous collagen organoid 24 days after implantation led to reduction of Hct to baseline levels within 14 days. In conclusion, this investigation demonstrates that mEpo+ MSCs embedded in a human-compatible viscous collagen matrix offers a potent, durable, and reversible approach for delivery of plasma-soluble therapeutic proteins.

L15 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
2004:454040 Document No. 142:154076 An experimental study on the difference of the antigenicity of xenogenic acellular dermal matrix (ADM). Jiang, Duyin; Chen, Bi; Jia, Chiyu; Tao, Ke (Xijing Hospital, Fourth Military Medical University, Xian, 710032, Peop. Rep. China). Zhonghua Shaoshang Zazhi, 19(3), 155-158 (Chinese) 2003. CODEN: ZSZHA5. ISSN: 1009-2587. Publisher: Zhonghua Shaoshang Zazhi Bianjibu.

AB The split-thickness skin sheet from swine was processed by trypsin and Triton X-100 to make xeno-acellular dermal matrix (ADM). Twenty-five Japanese white rabbits were divided into 5 groups, i.e. xeno-ADM1 (conjugated with glutaraldehyde), xeno-ADM2 (conjugated with network), xeno-ADM3 (no conjugation, as control), xeno-ADM4 (conjugated) and allo-ADM (no conjugated as control). In all groups, the ADMs were embedded into the s.c. place of rabbits' ear and back, after that the rabbits were pre-sensitized by xeno-ADM soluble protein antigen injections. The titers of anti ADMs antibody in rabbit serum were monitored during 2-32 post-operative weeks and the histol. changes of the embedded ADMs were observed grossly and microscopically. The serum titers of anti-xeno-ADM in xeno-ADM4 group was the highest. Regardless of the sensitizing effects, the titers in all groups ranged as follows: xeno-ADM3 >xeno-ADM2 >xeno-ADM1. About 40% serum samples in allo-ADM group exhibited pos. anti-allo-ADM protein antibodies. Histol., evident and lasting inflammatory reaction could be found in the xeno-ADM grafting sites, which was much stronger than that in allo-ADM group. The degradation and absorption gradient of ADM was ranked as follow: xeno-ADM3 >xeno-ADM2 >xeno-ADM4 >xeno-ADM1 >Allo-ADM. Foreign body megalocytic reaction might evoke in the surrounding of conjugated ADM. The immunogenicity in xeno-ADM was stronger than that in allo-ADM, which could induce the host to develop immune reaction restricted by IgG. Large sheets of degenerated ADM implants could lower down the antigen-antibody reaction and ameliorate the structural destroying and degeneration absorption of ADM induced by inflammatory immune reaction.

L15 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
1998:159746 Document No. 128:268746 Assembly of basement membrane in vitro by cooperation between alveolar epithelial cells and pulmonary fibroblasts. Furuyama, Akiko; Kimata, Koji; Mochitate, Katsumi (Environmental Health Sciences Division, National Institute for Environmental Studies, Tsukuba, 305, Japan). Cell Structure and Function, 22(6), 603-614 (English) 1997. CODEN: CSFUDY. ISSN: 0386-7196. Publisher: Japan Society for Cell Biology.

AB To investigate basement membrane formation by cooperation between pneumocytes and pulmonary fibroblasts, the authors cultured type II alveolar epithelial cells obtained from rats transfected with SV40-large T antigen gene (SV40-T2 cells) on type I collagen matrixes . On fibroblasts-embedded gel (T2-Fgel), SV40-T2 cells

ultrastructurally formed a continuous and thin layer of lamina densa, while on collagen gel without fibroblasts (T2-gel) SV40-T2 cells produced only discontinuous and diffuse deposits. Stripping SV40-T2 cells off the tissues by H2O2 treatment revealed a continuous and plane surface of lamina densa assembled on the T2-Fgel tissue, whereas only amorphous deposits appeared on the T2-gel tissue. Immunolocalization of major basement membrane components showed that type IV collagen, laminin, perlecan and entactin (nidogen) were continuously integrated on the lamina densa in T2-Fgel. In T2-gel, all these components were discontinuously distributed beneath SV40-T2 cells. The contribution of pulmonary fibroblasts to the assembly of basement membrane through reorganization of collagen matrix and/or soluble factors was examined by the cultured of SV40-T2 cells on the freeze-thawed fibroblast-tissue and/or with the fibroblast-conditioned medium. Both SV40-T2 cells on the freeze-thawed fibroblast-tissue and SV40-T2 cells in T2-gel in the fibroblast-conditioned medium failed to produce a lamina densa. SV40-T2 cells could assemble a lamina densa only on the freeze-thawed fibroblast-tissue in the fibroblast-conditioned medium. These results show that the basement membrane components are assembled to a lamina densa by combination of the reorganization of collagen matrix and the supply of soluble factors by pulmonary fibroblasts.

L15 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN

1997:217031 Document No. 126:314434 Improved immunohistochemical staining of osteopontin (OPN) in paraffin-embedded archival bone specimens following antigen retrieval: anti-human OPN antibody recognizes multiple molecular forms. Devoll, R. E.; Pinero, G. J.; Appelbaum, E. R.; Dul, E.; Troncoso, P.; Butler, W. T.; Farach-Carson, M. C. (Department of Basic Sciences, Health Science Center, The University of Texas-Houston, Dental Branch, Houston, TX, 77030, USA). Calcified Tissue International, 60(4), 380-386 (English) 1997. CODEN: CTINDZ. ISSN: 0171-967X. Publisher: Springer.

AB Studies to assess osteopontin (OPN) localization in adult human bone using immunochem. techniques produce conflicting results due to variations in tissue processing or antibody immunoreactivity. The present study was designed to resolve these discrepancies using well-characterized antibodies and improved antigen detection. An anti-osteopontin (α-OPN) antiserum was developed that recognizes various sol . mol. weight forms of human OPN, including monomeric, cleaved, and dimerized products. An affinity column of full length recombinant human OPN (rOPN) coupled to support was used to purify α-OPN antibodies. Western anal. showed that the affinity-purified antibodies recognized numerous mol. weight forms of OPN. These antibodies were used to study the distribution of OPN in adult human bone using immunohistochem. techniques combined with an antigen retrieval protocol utilizing a newly developed antigen retrieval solution, Retriev-All (Bronco Technologies Inc, Pasadena, TX). Immunolocalization of OPN in archival bone specimens prior to antigen retrieval produced no demonstrable immunostaining even at high concns. of α-OPN. Use of the antigen retrieval protocol restored OPN immunoreactivity, with strong staining apparent in cement lines, osteoblasts, osteocytes, canaliculi, osteoid, and bone matrix. We conclude that antigen retrieval restores immunochem. recognition of OPN in archival specimens containing bone without increasing nonspecific binding.

L15 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN

1996:383457 Document No. 125:56164 Fibronectin co-stimulates via the α5β1 receptor IL-2, IL-4 production by splenic, granuloma lymphocytes of Schistosoma mansoni infected mice. Zhu, Y.; Boros, D. L. (School Medicine, Wayne State University, Detroit, MI, 48201, USA). Scandinavian Journal of Immunology, 43(6), 633-639 (English) 1996 . CODEN: SJIMAX. ISSN: 0300-9475. Publisher: Blackwell.

AB In murine Schistosomiasis mansoni, soluble worm egg antigens (SEA) induce L3T4+ T helper cell-mediated chronic granulomatous inflammations around parasite eggs. Within the fully developed granuloma lymphocytes, macrophages, and eosinophils, fibroblasts are embedded in extracellular matrix (ECM) composed of fibronectin, laminin, glycosaminoglycans and collagens. The present study examined in vitro the putative co-stimulatory role of fibronectin (FN) in acute and chronic infection splenic and granuloma lymphocyte responses. Plate-bound FN enhanced the anti-CD3 MoAb stimulated normal and acute or chronic infection splenic lymphoproliferation by 20-32%. The co-stimulatory effect was evident in SEA stimulated acute but not chronic infection spleen cells. Proliferation of stimulated granuloma lymphocytes could not be up-regulated by immobilized FN. Plate-bound FN significantly enhanced IL-2 and IL-4 production by SEA-stimulated acute, but not chronic, infection granuloma lymphocytes. However, FN had no influence on the high level of IL-2, IL-4 production of anti-CD3 MoAb stimulated acute or chronic infection splenic or granuloma lymphocytes. Because in the antigen-stimulated acute infection spleen or granuloma cultures the co-stimulatory effect by FN was abrogated by the tripeptide (RGD) arg-gly-asp, and anti $\alpha 5\beta 1$ antibody, enhancement is attributed to signaling via the $\alpha 5\beta 1$ integrin receptor of lymphocytes.

L15 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
1987:192223 Document No. 106:192223 Usefulness of the immunogold technique in quantitation of a soluble protein in ultra-thin sections. Posthuma, George; Slot, Jan W.; Geuze, Hans J. (Med. Fac., Univ. Utrecht, Utrecht, Neth.). Journal of Histochemistry and Cytochemistry, 35(4), 405-10 (English) 1987. CODEN: JHCYAS. ISSN: 0022-1554.
AB A model system was used to study whether measurements of absolute local antigen concns. at the electron microscopic level are feasible by counting immunogold labeling d. in ultra-thin sections. The model system consisted of a matrix of a variable concentration of gelatin, which was mixed with given concns. of rat pancreas amylase and fixed according to various fixation protocols. With a relatively mild fixation, there was no clear proportionality between anti-amylase gold labeling and amylase concentration in ultra-thin cryosections. This was presumably due to uncontrolled loss of amylase from the sections. After stronger fixation with 2% glutaraldehyde for 4 h, labeling d. reflected the amylase concentration very well. Matrix (gelatin) d. influenced labeling d. A low gelatin concentration of 5% allowed penetration of immunoreagents into the cryosection, resulting in a high and variable labeling d. In gelatin concns. of 10% and 20%, labeling d. was lower but proportional to amylase concentration To establish an equal (minimal) penetration of immunoreagents, model blocks were embedded with different matrix densities in polyacrylamide (PAA). In ultra-thin cryosections of these PAA-embedded blocks, anti-amylase labeling was proportional to amylase concentration even at a low (5%) gelatin concentration Anti-amylase labeling in ultra-thin sections from Lowicryl K4M low temperature-embedded blocks was higher than in PAA sections, but the results were less consistent and depended to some extent on matrix d. These results, together with the earlier observation that acrylamide completely penetrates intracellular compartments, demonstrate that it is possible to measure true intracellular concns. of soluble proteins in situ using ultra-thin cryosections of PAA-embedded tissue.

L15 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
1986:221098 Document No. 104:221098 Electron microscopic immunocytochemistry of interstitial retinol-binding protein in vertebrate retinas. Schneider, Barbara G.; Papermaster, David S.; Liou, Gregory I.; Fong, Shao Ling; Bridges, C. David (Dep. Pathol., Yale Med. Sch., West Haven, CT, USA). Investigative Ophthalmology & Visual Science, 27(5), 679-88 (English)

1986. CODEN: IOVSDA. ISSN: 0146-0404.
AB Interstitial retinol-binding protein (IRBP) is a soluble glycoprotein found in the interphotoreceptor matrix (IPM) and implicated in shuttling retinol between retina and pigment epithelium (PE) cells. The distribution of IRBP was studied by electron microscopic (EM) immunocytochem. Thin sections of Lowicryl K4M-embedded Rana pipiens, Xenopus laevis, bovine, and human retinas were labeled sequentially with affinity-purified rabbit antibovine IRBP, biotinyl-sheep antirabbit F(Ab')2, and avidin-ferritin, or with avidin and biotinyl-ferritin. Antigen was in the interphotoreceptor space and intercalated into the narrow spaces between PE cell microvilli. IRBP penetration between PE cells was delimited abruptly by the PE junctional complexes. IRBP was also observed in small vacuoles in the apical cytoplasm of PE cells and in PE cell phagosomes that contained IRBP surrounding ingested rod tips. IPM was heavily but inhomogeneously labeled. Antigen was usually deposited along the rod and cone outer segment plasma membranes in a confluent layer, but sometimes it was distributed in large (.apprx.0.2 μm thick) clumps. In bovine and human retinas, the connecting cilium was ensheathed by antigen at high d., but an unlabeled halo surrounded its plasma membrane. The apical plasma membrane of the inner segment aligned along the connecting cilium was also densely coated by antigen. In none of the 4 species examined was Golgi labeling present. In bovine retinas, labeled vacuoles (granules) in the myoid region were found in very low nos. (15 vacuoles in 358 rod cells). Amphibian retinas also contained only small nos. of myoid vacuoles labeled by anti-IRBP. Absence of antibody binding to intracellular sites of synthesis in any of the cells that abut the interphotoreceptor matrix suggests that the antigen may be masked prior to its release from the synthetic cell(s) or that its level is below limits of detection.

=> s (scholz m?/au)
L16 2978 (SCHOLZ M?/AU)

=> s l16 and matrix
L17 80 L16 AND MATRIX

=> s l17 and stimulation
L18 4 L17 AND STIMULATION

=> dup remove l18
PROCESSING COMPLETED FOR L18
L19 2 DUP REMOVE L18 (2 DUPLICATES REMOVED)

=> d l19 1-2 cbib abs

L19 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
2005:975659 Document No. 143:254039 Formulation of leukocyte-stimulation matrixes for vaccination and the determination of T-cell subtypes. Scholz, Martin (Leukocare GmbH, Germany). Eur. Pat. Appl. EP 1571204 A1 20050907, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK. (German). CODEN: EPXXDW. APPLICATION: EP 2004-5177 20040304.
AB The invention concerns leukocyte-stimulation matrix and/or the induction of immunotolerance by using (a) one or more carriers; (b) a soluble matrix for embedding one or more components for leukocyte-stimulation and/or induction of immunotolerance; (c) one or more components for leukocyte-stimulation and/or induction of immunotolerance that are embedded in the soluble matrix . Further ingredients are coupling agents for binding the carrier with

the components for leukocyte-stimulation and/or induction of immunotolerance. Typical stimulating agents are antigens, MHC antigens, cell debris, viruses, etc. Polyurethane, polystyrene, and medical metals, glasses, natural products are the carriers. As coupling agents bromocyan, agarose, silane, etc. are used; matrixes are starch, cellulose, glycogen, polyethylene glycol.

L19 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 1

2003537240. PubMed ID: 14618385. Dose-dependent effects of combined IGF-I and TGF-beta1 application in a sheep cervical spine fusion model. Kandziora F; Pflugmacher R; Scholz M; Schafer J; Schollmeier G; Schmidmaier G; Duda G; Raschke M; Haas N P. (Unfall- und Wiederherstellungschirurgie, Universitatsklinikum Charite der Humboldt-Universitat Berlin, Campus Virchow-Klinikum, Augustenburgerplatz 1, 13353 Berlin, Germany.. frank.kandziora@charite.de) . European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society, (2003 Oct) Vol. 12, No. 5, pp. 464-73. Electronic Publication: 2002-11-08. Journal code: 9301980. ISSN: 0940-6719. Pub. country: Germany: Germany, Federal Republic of. Language: English.

AB Combined IGF-I and TGF-beta1 application by a poly-(D,L-lactide) (PDLLA) coated interbody cage has proven to promote spine fusion. The purpose of this study was to determine whether there is a dose-dependent effect of combined IGF-I and TGF-beta1 application on intervertebral bone matrix formation in a sheep cervical spine fusion model.
Thirty-two sheep underwent C3/4 discectomy and fusion. Stabilisation was performed using a titanium cage coated with a PDLLA carrier including no growth factors in group 1 (n=8), 75 micro g IGF-I plus 15 micro g TGF-beta1 in group 2 (n=8), 150 micro g IGF-I plus 30 micro g TGF-beta1 in group 3 (n=8) and 300 micro g IGF-I plus 60 micro g TGF-beta1 in group 4 (n=8). Blood samples, body weight and temperature were analysed. Radiographic scans were performed pre- and postoperatively and after 1, 2, 4, 8, and 12 weeks. At the same time points, disc space height and intervertebral angle were measured. After 12 weeks, the animals were killed and fusion sites were evaluated using quantitative computed tomographic (CT) scans to assess bone mineral density, bone mineral content and bony callus volume. Biomechanical testing was performed and range of motion, and neutral and elastic zones were determined. Histomorphological and histomorphometrical analysis were carried out and polychrome sequential labelling was used to determine the time frame of new bone formation. In comparison to the group without growth factors (group 1), the medium- and high-dose growth factor groups (groups 3 and 4) demonstrated a significantly higher bony callus volume on CT scans, a higher biomechanical stability, an advanced interbody bone matrix formation in histomorphometrical analysis, and an earlier bone matrix formation on fluorochrome sequence labelling.
Additionally, the medium- and high-dose growth factor groups (groups 3 and 4) demonstrated a significantly higher bony callus volume, a higher biomechanical stability in rotation, and an advanced interbody bone matrix formation in comparison to the low-dose growth factor group (group 2). No significant difference could be determined between the medium- and the high-dose growth factor groups (groups 3 and 4, respectively). The local application of IGF-I and TGF-beta1 by a PDLLA-coated cage significantly improved results of interbody bone matrix formation in a dose-dependent manner. The best dose-response relationship was achieved with the medium growth factor dose (150 micro g IGF-I and 30 micro g TGF-beta1). With an increasing dose of these growth factors, no further stimulation of bone matrix formation was observed. Although these results are encouraging, safety issues of combined IGF-I and TGF-beta1 application for spinal fusion still have to be addressed.

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L20          1 L17 AND TOLERANCE

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L20  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
2005:975659   Document No. 143:254039  Formulation of leukocyte-stimulation
     matrixes for vaccination and the determination of T-cell subtypes.
     Scholz, Martin (Leukocare GmbH, Germany).  Eur. Pat. Appl. EP
     1571204 A1 20050907, 15 pp.  DESIGNATED STATES: R:  AT, BE, CH, DE, DK,
     ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK,
     CY, AL, TR, BG, CZ, EE, HU, PL, SK.  (German).  CODEN: EPXXDW.
     APPLICATION: EP 2004-5177 20040304.
AB   The invention concerns leukocyte-stimulation matrix and/or the
     induction of immunotolerance by using (a) one or more carriers; (b) a soluble
     matrix for embedding one or more components for
     leukocyte-stimulation and/or induction of immunotolerance; (c) one or more
     components for leukocyte-stimulation and/or induction of immunotolerance
     that are embedded in the soluble matrix.  Further ingredients are
     coupling agents for binding the carrier with the components for
     leukocyte-stimulation and/or induction of immunotolerance.  Typical
     stimulating agents are antigens, MHC antigens, cell debris, viruses, etc.
     Polyurethane, polystyrene, and medical metals, glasses, natural products
     are the carriers.  As coupling agents bromocyan, agarose, silane, etc. are
     used; matrixes are starch, cellulose, glycogen, polyethylene
     glycol.


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PROCESSING COMPLETED FOR L17
L21          32 DUP REMOVE L17 (48 DUPLICATES REMOVED)

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L22         23 L21 AND PD<20040304

=> d l22 1-23 cbib abs

L22  ANSWER 1 OF 23     MEDLINE on STN
2004562595.    PubMed ID: 15534403.   Bioabsorbable interbody cages in a sheep
     cervical spine fusion model. Kandziora Frank; Pflugmacher Robert;
     Scholz Matti; Eindorf Tanja; Schnake Klaus J; Haas Norbert P.
     (Unfall- und Wiederherstellungschirurgie, Universitatsklinikum Charite der
     Humboldt-Universitat Berlin, Campus Virchow-Klinikum, Germany..
     frank.kandziora@charite.de) . Spine, (2004 Sep 1) Vol. 29, No.
     17, pp. 1845-55; discussion 1856.  Journal code: 7610646. E-ISSN:
     1528-1159. Pub. country: United States. Language: English.
AB   STUDY DESIGN: An experimental study using a sheep cervical spine interbody
     fusion model.  OBJECTIVES: To compare interbody fusion of an autologous
     tricortical iliac crest bone graft with two bioabsorbable cages and to
     determine whether there are differences between the three interbody fusion
     techniques in 1) the ability to preserve postoperative distraction, 2) the
     biomechanical stability, and 3) the histologic characteristics of
     intervertebral bone matrix formation.  SUMMARY AND BACKGROUND
     DATA: Bioabsorbable cages would be beneficial compared with metallic
     cages; however, currently no suitable bioabsorbable interbody fusion cage
     is available.  METHOD: Twenty-four sheep underwent C3/C4 discectomy and
     fusion.  The following stabilization techniques were used: Group 1)
     autologous tricortical iliac crest bone graft (n = 8); Group 2)
     bioabsorbable cage made of 70/30 poly(l-lactide-co-d,l-lactide)
     (experimental) filled with autologous cancellous bone graft (n = 8); Group
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3) bioabsorbable cage made of a polymer-calciumphosphate composite (Biomet Europe, Dordrecht, The Netherlands) filled with autologous cancellous bone graft (n = 8). Radiographic scans to determine disc space height were performed before and after surgery and after 1, 2, 4, 8, and 12 weeks, respectively. After 12 weeks, animals were killed, and fusion sites were evaluated using functional radiographic views in flexion and extension. Quantitative computed tomographic scans were used to assess bone mineral density, bone mineral content, and bony callus volume. Biomechanical testing was performed in flexion, extension, axial rotation, and lateral bending to determine stiffness, ROM, and neutral and elastic zone. Histomorphological and histomorphometrical analysis were performed to evaluate fusion and foreign body reactions associated with the bioabsorbable cages. RESULTS: Over a 12-week period, the polymer-calciumphosphate composite cage showed significantly higher values for disc space height compared with the bone graft and the poly(l-lactide-co-d,l-lactide) cage. Additionally, the polymer-calciumphosphate composite cage demonstrated a significantly higher stiffness and lower ROM, neutral zone, and elastic zone in axial rotation and lateral bending than any other group. However, quantitative computed tomographic scans demonstrated cracks in six of the eight polymer-calciumphosphate composite cages after 12 weeks. Histologically, the highest bone volume/total volume ratio and the highest fusion rate were found in the polymer-calciumphosphate composite cage group. Although the poly(l-lactide-co-d,l-lactide) cage showed grade I through III foreign body reactions in all fusion areas, only two animals developed grade I foreign body reactions with the polymer-calciumphosphate composite cage. CONCLUSION: After 12 weeks, there was no significant difference between the bioabsorbable poly(l-lactide-co-d,l-lactide) cage and the tricortical bone graft. In comparison to the tricortical bone graft, the bioabsorbable polymer-calciumphosphate composite cage showed significantly better distractive properties, a significantly higher biomechanical stiffness, and an advanced interbody fusion; however, six of eight polymer-calciumphosphate composite cages cracked. Although the fate of the foreign body reactions and the cracks is currently unclear for both bioabsorbable cages, the early appearance of large osteolysis associated with use of the poly(l-lactide-co-d,l-lactide) cage allows skepticism regarding the value of this bioabsorbable implant.

L22 ANSWER 2 OF 23 MEDLINE on STN

2004530284. PubMed ID: 15146281. [Biodegradable cage. Osteointegration in spondylodesis of the sheep cervical spine]. Biodegradierbarer Cage. Osteointegration bei Spondylodese der Schafhalswirbelsaule. Pflugmacher R; Eindorf T; Scholz M; Gumnior S; Krall C; Schleicher P; Haas N P; Kandziora F. (Unfall- und Wiederherstellungschirurgie, Universitatsklinikum Charite, Humboldt-Universitat, Campus Virchow-Klinikum, Berlin.. robert.pflugmacher@charite.de) . Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen, (2004 Oct) Vol. 75, No. 10, pp. 1003-12. Journal code: 16140410R. ISSN: 0009-4722. Pub. country: Germany: Germany, Federal Republic of. Language: German.

AB Bioabsorbable implants are commonplace in knee and shoulder surgery. Bioabsorbable poly(l-lactide-co-D,L-lactide) (PLDLLA) cage devices have potential benefits over autologous tricortical iliac crest bone graft and metallic cages for cervical spine interbody fusion. The purpose of this study was to compare interbody fusion of an autologous tricortical iliac crest bone graft with that of a bioabsorbable cage using a sheep cervical spine interbody fusion model. This study was designed to determine differences in (1) the ability to preserve postoperative distraction, (2) biomechanical stability, and (3) histological characteristics of intervertebral bone matrix formation. Sixteen full-grown Merino sheep underwent C3/4 discectomy and fusion. After 12 weeks, there was no significant difference between the results with the bioabsorbable PLDLLA cages and tricortical bone grafts. The cage also did not show advanced

interbody fusion but did, however, show large osteolysis, which allows skepticism regarding the value of this bioabsorbable implant.

L22 ANSWER 3 OF 23 MEDLINE on STN

2003537240. PubMed ID: 14618385. Dose-dependent effects of combined IGF-I and TGF-beta1 application in a sheep cervical spine fusion model. Kandziora F; Pflugmacher R; Scholz M; Schafer J; Schollmeier G; Schmidmaier G; Duda G; Raschke M; Haas N P. (Unfall- und Wiederherstellungschirurgie, Universitatsklinikum Charite der Humboldt-Universitat Berlin, Campus Virchow-Klinikum, Augustenburgerplatz 1, 13353 Berlin, Germany.. frank.kandziora@charite.de) . European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society, (2003 Oct) Vol. 12, No. 5, pp. 464-73. Electronic Publication: 2002-11-08. Journal code: 9301980. ISSN: 0940-6719. Pub. country: Germany: Germany, Federal Republic of. Language: English.

AB Combined IGF-I and TGF-beta1 application by a poly-(D,L-lactide) (PDLLA) coated interbody cage has proven to promote spine fusion. The purpose of this study was to determine whether there is a dose-dependent effect of combined IGF-I and TGF-beta1 application on intervertebral bone matrix formation in a sheep cervical spine fusion model.
Thirty-two sheep underwent C3/4 discectomy and fusion. Stabilisation was performed using a titanium cage coated with a PDLLA carrier including no growth factors in group 1 (n=8), 75 micro g IGF-I plus 15 micro g TGF-beta1 in group 2 (n=8), 150 micro g IGF-I plus 30 micro g TGF-beta1 in group 3 (n=8) and 300 micro g IGF-I plus 60 micro g TGF-beta1 in group 4 (n=8). Blood samples, body weight and temperature were analysed. Radiographic scans were performed pre- and postoperatively and after 1, 2, 4, 8, and 12 weeks. At the same time points, disc space height and intervertebral angle were measured. After 12 weeks, the animals were killed and fusion sites were evaluated using quantitative computed tomographic (CT) scans to assess bone mineral density, bone mineral content and bony callus volume. Biomechanical testing was performed and range of motion, and neutral and elastic zones were determined. Histomorphological and histomorphometrical analysis were carried out and polychrome sequential labelling was used to determine the time frame of new bone formation. In comparison to the group without growth factors (group 1), the medium- and high-dose growth factor groups (groups 3 and 4) demonstrated a significantly higher bony callus volume on CT scans, a higher biomechanical stability, an advanced interbody bone matrix formation in histomorphometrical analysis, and an earlier bone matrix formation on fluorochrome sequence labelling.
Additionally, the medium- and high-dose growth factor groups (groups 3 and 4) demonstrated a significantly higher bony callus volume, a higher biomechanical stability in rotation, and an advanced interbody bone matrix formation in comparison to the low-dose growth factor group (group 2). No significant difference could be determined between the medium- and the high-dose growth factor groups (groups 3 and 4, respectively). The local application of IGF-I and TGF-beta1 by a PDLLA-coated cage significantly improved results of interbody bone matrix formation in a dose-dependent manner. The best dose-response relationship was achieved with the medium growth factor dose (150 micro g IGF-I and 30 micro g TGF-beta1). With an increasing dose of these growth factors, no further stimulation of bone matrix formation was observed. Although these results are encouraging, safety issues of combined IGF-I and TGF-beta1 application for spinal fusion still have to be addressed.

L22 ANSWER 4 OF 23 MEDLINE on STN

2002634699. PubMed ID: 12395162. [Experimental fusion of the sheep cervical spine. Part II: Effect of growth factors and carrier systems on

interbody fusion]. Experimentelle Spondylodese der Schafshalswirbelsaule Teil 2: Der Effekt von Wachstumsfaktoren und Carrier-Systemen auf die intervertebrale Fusion. Kandziora F; Scholz M; Pflugmacher R; Krummrey G; Schollmeier G; Schmidmaier G; Schnake K J; Duda G; Raschke M; Haas N P. (Unfall und Wiederherstellungschirurgie, Universitatsklinikum Charite der Humboldt-Universitat Berlin, Campus Virchow-Klinikum, Germany.. frank.kandziora@charite.de) . Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen, (2002 Oct) Vol. 73, No. 10, pp. 1025-38. Journal code: 16140410R. ISSN: 0009-4722. Pub. country: Germany: Germany, Federal Republic of. Language: German.

AB INTRODUCTION: A sheep cervical spine interbody fusion model was used to determine the effect of different carriers and growth factors on interbody bone matrix formation. The purpose of this study was to compare the efficacy and safety of combined IGF-I and TGF-beta1 application with BMP-2 application in spinal fusion. Additionally, a new poly (D, L-lactide) carrier system was compared to a collagen sponge carrier. METHOD: Forty sheep underwent C3/4 discectomy and fusion: group 1: titanium cage (n=8), group 2: titanium cage coated with a PDLLA carrier (n=8), group 3: titanium cage coated with a PDLLA carrier including BMP-2 (n=8), group 4: titanium cage with a collagen carrier including BMP-2 (n=8), and group 5: titanium cage coated with a PDLLA carrier including IGF-I and TGF-beta1 (n=8). Blood samples, body weight, and temperature were analyzed. Radiographic scans were performed pre- and postoperatively and after 1, 2, 4, 8, and 12 weeks, respectively. At the same time points, disc space height (DSH) and intervertebral angle (IVA) were measured. After 12 weeks the animals were killed and fusion sites were evaluated using functional radiographic views in flexion and extension. Quantitative computed tomographic scans (QCT) were performed to assess bone mineral density (BMD), bone mineral content (BMC), and bony callus volume (BCV). Biomechanical testing was carried out in flexion, extension, axial rotation, and lateral bending. Range of motion (ROM), neutral zone (NZ), and elastic zone (EZ) were determined. Histomorphological and histomorphometrical analyses were performed and polychrome sequential labeling was used to determine the time frame of new bone formation. RESULTS: In comparison to the non-coated cages, all PDLLA-coated cages showed significantly higher values for BMD of the callus and bone volume/total volume ratio. In comparison to the cage groups (groups 1 and 2), the cage plus BMP-2 (groups 3 and 4) and the cage plus IGF-I and TGF-beta1 group (group 5) demonstrated a significantly higher fusion rate in radiographic findings, a higher biomechanical stability, an advanced interbody fusion in histomorphometric analysis, and an accelerated interbody fusion on fluorochrome sequence labeling. BMP-2 application by the PDLLA carrier system (group 3) demonstrated significantly higher bony callus volume than BMP-2 application by a collagen sponge carrier (group 4). The BMP-2 group (group 3) showed significantly lower residual motion on functional radiographic evaluation and higher intervertebral bone matrix formation on fluorochrome sequence labeling at 9 weeks in comparison to the IGF-I/TGF-beta1 group (group 5). In contrast, the IGF-I/TGF-beta1 group (group 5) showed a significantly higher bone mineral density of the callus than the BMP-2 group (group 3). CONCLUSION: PDLLA coating of cervical spine interbody fusion cages as a delivery system for growth factors was effective and safe. In comparison to the collagen sponge carrier, the new PDLLA carrier system was able to improve results of interbody bone matrix formation. Both growth factors (BMP-2 and combined IGF-I and TGF-beta1) significantly accelerated results of interbody fusion. Based on these preliminary results, the combined IGF-I/TGF-beta1 application yields results equivalent to BMP-2 application at an early time in anterior sheep cervical spine fusion.

L22 ANSWER 5 OF 23 MEDLINE on STN

2002626184. PubMed ID: 12384758. Comparison of BMP-2 and combined

IGF-I/TGF-ss1 application in a sheep cervical spine fusion model.
Kandziora F; Pflugmacher R; Scholz M; Knispel C; Hiller T; Schollmeier G; Bail H; Schmidmaier G; Duda G; Raschke M; Haas N P. (Department of Trauma and Reconstructive Surgery, Charite University Hospital of the Humboldt University Berlin, Campus Virchow-Klinikum, Augustenburgerplatz 1, 13353 Berlin, Germany.. frank.kandziora@charite.de) . European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society, (2002 Oct) Vol. 11, No. 5, pp. 482-93. Electronic Publication: 2002-03-14. Journal code: 9301980. ISSN: 0940-6719. Pub. country: Germany: Germany, Federal Republic of. Language: English.

AB Growth factors have proven to promote spine fusion. However, no comparative evaluation of growth factors in spinal fusion has yet been performed. The purpose of this study was to compare the efficacy and safety of combined IGF-I and TGF-ss1 application with BMP-2 application and autologous cancellous bone graft at an early time point in a sheep cervical spine fusion model. Thirty-two sheep underwent C3/4 discectomy and fusion. They were divided into four groups, according to their treatment: group 1, titanium cage (n=8); group 2, titanium cage filled with autologous cancellous iliac crest bone grafts (n=8); group 3, titanium cage coated with a poly-(D,L-lactide) (PDLLA) carrier including BMP-2 (5% w/w) (n=8); group 4, titanium cage coated with a PDLLA carrier including IGF-I (5% w/w) and TGF-ss1 (1% w/w) (n=8). Blood samples, body weight and temperature were analysed. Radiographic scans were performed pre- and postoperatively and after 1, 2, 4, 8 and 12 weeks. At the same time points, disc space height and intervertebral angle were measured. After 12 weeks, the animals were killed and fusion sites were evaluated using functional radiographic views in flexion and extension. Quantitative computed tomographic scans were performed to assess bone mineral density, bone mineral content and bony callus volume. Biomechanical testing was carried out and the values for range of motion, and neutral and elastic zone were determined. Histomorphological and histomorphometrical analysis were performed and polychrome sequential labelling was used to determine the time frame of new bone formation. The results showed that, in comparison to the group treated with the cage alone (group 1), the cage plus BMP-2 group (group 3) and the cage plus IGF-I and TGF-ss1 group (group 4) demonstrated a significantly higher fusion rate in radiographic findings, a higher biomechanical stability, a more advanced interbody fusion in histomorphometrical analysis, and an accelerated interbody fusion on fluorochrome sequence labelling. In comparison to the bone graft group (group 2), the BMP-2 (group 3) and IGF-I/TGF-ss1 group (group 4) showed significantly less residual motion on functional radiographic evaluation, higher bone mineral density of the callus and higher biomechanical stability in extension, rotation and bending. The BMP-2 group showed significantly less residual motion on functional radiographic evaluation and higher intervertebral bone matrix formation on fluorochrome sequence labelling at 9 weeks in comparison to the IGF-I/TGF-ss1 group. In contrast, the IGF-I/TGF-ss1 group showed a significantly higher bone mineral density of the callus than the BMP-2 group. In comparison to the autologous cancellous bone graft group, both growth factors (BMP-2 and combined IGF-I and TGF-ss1) significantly improved the biomechanical results of interbody fusion. No systemic side effects were observed for either growth factor. On the basis of these preliminary results, it would appear that combined IGF-I/TGF-ss1 application yields equivalent results to BMP-2 application at an early time point in anterior sheep cervical spine fusion.

L22 ANSWER 6 OF 23 MEDLINE on STN

2002486563. PubMed ID: 12297957. [Experimental fusion of the sheep cervical spine. Part I: Effect of cage design on interbody fusion]. Experimentelle Spondylodese der Schafshalswirbelsaule Teil 1: Der Effekt

des Cage-Designs auf die intervertebrale Fusion. Kandziora F; Pflugmacher R; Scholz M; Schafer J; Schollmeier G; Schnake K J; Bail H; Duda G; Haas N P. (Unfall- und Wiederherstellungschirurgie, Campus Virchow-Klinikum, Universitatsklinikum Charite der Humboldt-Universitat Berlin, Germany.. frank.kandziora@charite.de) . Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen, (2002 Sep) Vol. 73, No. 9, pp. 909-17. Journal code: 16140410R. ISSN: 0009-4722. Pub. country: Germany: Germany, Federal Republic of. Language: German.

AB INTRODUCTION: There has been a rapid increase in the use of interbody fusion cages as an adjunct to spondylodesis, although experimental data are lacking. A sheep cervical spine interbody fusion model was used to determine the effect of different cage design parameters (endplate-implant contact area, maximum contiguous pore) on interbody fusion. MATERIAL AND METHOD: IN VITRO EVALUATION: 24 sheep cadaver specimens (C2-C5) were tested in flexion, extension, axial rotation, and lateral bending with a nondestructive flexibility method using a nonconstrained testing apparatus. Four different groups were examined: (1) control group (intact) (n=24), (2) autologous tricortical iliac crest bone graft (n=8), (3) Harms cage (n=8), and (4) SynCage-C (n=8). IN VIVO EVALUATION: 24 sheep underwent C3/4 discectomy and fusion: group 1: autologous tricortical iliac crest bone graft (n=8), group 2: Harms cage filled with autologous cancellous iliac crest bone grafts (n=8), and group 3: SynCage-C filled with autologous cancellous iliac crest bone grafts (n=8). Radiographic scans were performed pre- and postoperatively and after 1, 2, 4, 8, and 12 weeks, respectively. At the same time points, disc space height (DSH), height index (HI), intervertebral angle (IVA), and endplate angle (EA) were measured. After 12 weeks the animals were killed and fusion sites were evaluated using biomechanical testing in flexion, extension, axial rotation, and lateral bending. Additionally, histomorphological and histomorphometrical analyses were performed. RESULTS: Over a 12-week period the cage groups showed significantly higher values for DSH, HI, IVA, and EA compared to the bone graft. In vivo stiffness was significantly higher for the tricortical iliac crest bone graft and Harms cage than in vitro stiffness. However, there was no difference between in vitro and in vivo stiffness of the SynCage-C. Histomorphometrical evaluation showed a more progressed bone matrix formation in the Harms cage group than in both other groups. CONCLUSION: The parameter endplate-implant contact area was not able to determine subsidence of cages. In contrast, the maximum contiguous pore of a cage significantly correlates with interbody bone matrix formation inside the cage. Additionally, there was no correlation between in vitro and in vivo stiffness of interbody fusion cages. Therefore, biomechanical in vitro studies are not able to determine in vivo outcome of fusion cages. Animal experimental evaluations of interbody fusion cages are essential prior to clinical use.

L22 ANSWER 7 OF 23 MEDLINE on STN

2002375687. PubMed ID: 12120650. Bone morphogenetic protein-2 application by a poly(D,L-lactide)-coated interbody cage: in vivo results of a new carrier for growth factors. Kandziora Frank; Bail Hermann; Schmidmaier Gerhard; Schollmeier Georg; Scholz Matti; Knispel Christian; Hiller Timo; Pflugmacher Robert; Mittlmeier Thomas; Raschke Michael; Haas Norbert P. (Unfall- und Wiederherstellungschirurgie, Universitatsklinikum Charite der Humboldt Universitat Berlin, Germany.. frank.kandziora@charite.de) . Journal of neurosurgery, (2002 Jul) Vol. 97, No. 1 Suppl, pp. 40-8. Journal code: 0253357. ISSN: 0022-3085. Pub. country: United States. Language: English.

AB OBJECT: Growth factors such as bone morphogenetic protein-2 (BMP-2) have been proven to promote spine fusion and to overcome the disadvantages of an autologous bone graft. The optimum method to deliver such growth factors remains a matter of discussion. The purpose of this study was to determine the safety and efficacy of a new poly(D,L-lactide) (PDLLA)

carrier system for BMP-2 and to compare this carrier system with a collagen sponge carrier in a sheep cervical spine interbody fusion model. METHODS: Thirty-two sheep underwent C3-4 discectomy and fusion: Group 1, titanium cage (eight animals); Group 2, titanium cage coated with a PDLLA carrier (eight animals); Group 3, titanium cage coated with a PDLLA carrier including BMP-2 (150 microg) (eight animals); and Group 4, titanium cage combined with a collagen sponge carrier including BMP-2 (150 microg) (eight animals). Blood samples, body weight, and temperature were assessed. Radiographs were obtained pre- and postoperatively and after 1, 2, 4, 8, and 12 weeks. At the same time points, disc space height, intervertebral angle, and lordosis angle were measured. After the sheep were killed 12 weeks postoperatively, flexion-extension radiography was performed to evaluate fusion sites. Quantitative computerized tomography scans were obtained to assess bone mineral density (BMD), bone mineral content (BMC), and bone callus volume (BCV). Biomechanical testing was performed in flexion, extension, axial rotation, and lateral bending. Stiffness, range of motion, neutral, and elastic zone were determined. Histomorphological and -morphometrical analyses were performed, and polychrome sequential labeling was used to determine the timeframe of new bone formation. There were no differences among the groups concerning blood counts, body weight, and temperature. Compared with the noncoated cages, all PDLLA-coated cages showed significantly higher values for BMD of the callus, as well as slightly higher values for BMC, BCV, and the bone volume/total volume ratio. In comparison with the cage-alone group, the BMP-2 groups showed significantly higher values for BMD and biomechanical stiffness. Histomorphological, -morphometrical, and polychrome sequential labeling analyses demonstrated greater progression of callus formation in the BMP-2 groups than in any other group. Compared with BMP-2 delivered using a collagen sponge carrier, BMP-2 application with a PDLLA carrier resulted in a higher BCV and a greater progression of interbody callus formation in the histomorphometrical analysis. CONCLUSIONS: The use of cervical spine interbody fusion cages coated with PDLLA as a delivery system for growth factors was effective. In this 12-week follow-up study, the PDLLA coating showed no adverse effects. The slight but not significant positive effect of the PDLLA carrier on interbody fusion might be a result of the degradation process of the biodegradable carrier. Compared with collagen sponge delivery of BMP-2, the PDLLA-coated interbody cages significantly increased the results of interbody bone matrix formation. In this new combination (implant + PDLLA + growth factor) the cage represents a "real fusion" cage, because it not only serves as a mechanical device for spinal fixation but also as a local drug delivery system.

L22 ANSWER 8 OF 23 MEDLINE on STN

2002250777. PubMed ID: 11990842. Influence of cage design on interbody fusion in a sheep cervical spine model. Kandziora Frank; Schollmeier Georg; Scholz Matti; Schaefer Jan; Scholz Alexandra; Schmidmaier Gerhard; Schroder Ralf; Bail Herman; Duda Georg; Mittlmeier Thomas; Haas Norbert P. (Unfall- and Wiederherstellungschirurgie, Universitatsklinikum Charite der Humboldt-Universitat Berlin, Germany.. frank.kandziora@charite.de) . Journal of neurosurgery, (2002 Apr) Vol. 96, No. 3 Suppl, pp. 321-32. Journal code: 0253357. ISSN: 0022-3085. Pub. country: United States. Language: English.

AB OBJECT: The purpose of this study was to compare the characteristics of interbody fusion achieved using an autologous tricortical iliac crest bone graft with those of a cylinder- and a box-design cage in a sheep cervical spine model. This study was designed to determine whether there are differences between three interbody fusion procedures in: 1) ability to preserve postoperative distraction; 2) biomechanical stability; and 3) histological characteristics of intervertebral bone matrix formation. METHODS: Twenty-four sheep underwent C3-4 discectomy and fusion in which the following were used: Group 1, autologous tricortical

iliac crest bone graft (eight sheep); Group 2, titanium cylinder-design cage filled with autologous iliac crest bone graft (eight sheep); and Group 3, titanium box-design cage filled with autologous iliac crest graft (eight sheep). Radiography was performed pre- and postoperatively and after 1, 2, 4, 8, and 12 weeks. At the same time points, disc space height, intervertebral angle, and lordosis angle were measured. After 12 weeks, the sheep were killed, and fusion sites were evaluated by obtaining functional radiographs in flexion and extension. Quantitative computerized tomography scans were acquired to assess bone mineral density, bone mineral content, and bone callus volume. Biomechanical testing was performed in flexion, extension, axial rotation, and lateral bending. Stiffness, range of motion, neutral zone, and elastic zone were determined. Histomorphological and histomorphometric analyses were performed, and polychrome sequential labeling was used to determine the time frame of new bone formation. Over a 12-week period significantly higher values for disc space height and intervertebral angle were shown in cage-treated sheep than in those that received bone graft. Functional radiographic assessment revealed significantly lower residual flexion-extension movement in sheep with the cylinder cage-fixed spines than in those that received bone graft group. The cylinder-design cages showed significantly higher values for bone mineral content, bone callus content, and stiffness in axial rotation and lateral bending than the other cages or grafts. Histomorphometric evaluation and polychrome sequential labeling showed a more progressed bone matrix formation in the cylindrical cage group than in both other groups. CONCLUSIONS: Compared with the tricortical bone graft, both cages showed significantly better distractive properties. The cylindrical cage demonstrated a significantly higher biomechanical stiffness and an accelerated interbody fusion compared with the box-design cage and the tricortical bone graft. The differences in bone matrix formation within both cages were the result of the significantly lower stress shielding on the bone graft by the cylinder-design cage.

L22 ANSWER 9 OF 23 MEDLINE on STN

2001336439. PubMed ID: 11403711. Changes of fibrosis-related parameters after high- and low-LET irradiation of fibroblasts. Fournier C; Scholz M; Weyrather W K; Rodemann H P; Kraft G. (GSI/Biophysics, Planckstrasse 1, D-64291 Darmstadt, Germany.. c.fournier@gsi.de) . International journal of radiation biology, (2001 Jun) Vol. 77, No. 6, pp. 713-22. Journal code: 8809243. ISSN: 0955-3002. Pub. country: England: United Kingdom. Language: English.

AB PURPOSE: To investigate the radiation-induced, premature terminal differentiation and collagen production of fibroblasts after heavy ion irradiation. These endpoints are discussed as an underlying cellular mechanism of fibrosis. MATERIALS AND METHODS: Normal human foreskin fibroblasts (AG1522B) were used to determine clonogenic survival, the premature differentiation and synthesis of extracellular matrix (ECM) proteins, e.g. collagen after irradiation with X-rays, 195 and 11.0 MeV u(-1) carbon ions and 9.9 MeV u(-1) nickel ions. Additionally, biopsies from the skin of minipigs were taken. Similar experiments were carried out after irradiation with X-rays and 195 MeV u(-1) carbon ions. Results and conclusions: RBE for clonogenic survival as well as for fibrosis-related parameters for high-energy carbon ions are slightly above unity. Low-energy carbon ions with a higher LET are more efficient than X-rays, whereas the RBE of nickel ions is below unity. The results obtained for the differentiation pattern and protein production of porcine fibroblasts after irradiation with X-rays and high-energy carbon ions are in agreement with those obtained with human fibroblasts. An accumulation of fibrocytes with a concomitant increase in ECM protein production could be seen after in vitro irradiation. There is no indication of a higher RBE for fibrosis-related parameters compared with other endpoints (survival, chromosomal and DNA damage). The dose- and LET-dependence

suggest that premature differentiation is a survival strategy after radiation damage.

L22 ANSWER 10 OF 23 MEDLINE on STN

2001324379. PubMed ID: 11267742. Application of a fiber-optic NIR-EFA sensor system for in situ monitoring of aromatic hydrocarbons in contaminated groundwater. Buerck J; Roth S; Kraemer K; Scholz M; Klaas N. (Forschungszentrum Karlsruhe, Institut fur Instrumentelle Analytik, P.O. Box 3640, D-76021 Karlsruhe, Germany.. jochen.buerck@ifia.fzk.de) . Journal of hazardous materials, (2001 May 7) Vol. 83, No. 1-2, pp. 11-28. Journal code: 9422688. ISSN: 0304-3894. Pub. country: Netherlands. Language: English.

AB Interaction of analyte molecules with the evanescent wave of light guided in optical fibers is among the most promising novel sensing schemes that can be applied for environmental monitoring and on-line process analysis. By combining this measuring principle with the solid-phase extraction of analyte molecules into the polymer cladding of a fiber, it is possible to perform direct absorption measurements in the cladding, if the fiber is adapted to a conventional spectrometer/photometer. A big advantage of this arrangement is that the measurement is scarcely disturbed by matrix effects (background absorption of water in IR measurements, stray light due to turbidity in the sample). By using near-infrared (NIR) evanescent field absorption (EFA) measurements in quartz glass fibers coated with a hydrophobic silicone membrane it is possible to design and construct sensors for monitoring apolar hydrocarbons (HCs) in aqueous matrices.The paper presents a fiber-optic sensor system for the determination of aromatic HCs in groundwater or industrial wastewater. Generally, this instrument is suitable for quantitative in situ monitoring of pollutants such as aromatic solvents, fuels, mineral oils or chlorinated HCs with relatively low water saturation solubility (typically between 0.01 and 10 g l(-1)). The sensor probe is connected via all-silica fibers to a filter photometer developed at the IFIA, thus, allowing even remote analysis in a monitoring well. This portable instrument provides a total concentration signal of the organic compounds extracted into the fiber cladding by measuring the integral absorption at the 1st C--H overtone bands in the NIR spectral range.In situ measurements with the sensor system were performed in a groundwater circulation well at the VEGAS research facility of the University of Stuttgart (Germany). The NIR-EFA sensor system was tested within the frame of an experiment that was carried through in a tank containing sandy gravel with a groundwater-saturated aquifer, where soil and groundwater were contaminated with technical grade xylene. The goal of this experiment was to model and optimize the groundwater circulation well used for the remediation of the aquifer and soil surrounding the well. The sensor proved to trace reliably the total hydrocarbon concentration in the process water pumped from the well to a stripper column. Measurements were performed continuously over 4 months with C8 HC sum concentrations in the process water between 80 mg l(-1) down to the limit of detection, which is around 200 microg l(-1). It could be demonstrated that the fiber-optic sensor system is a valuable tool for near-real-time control of a remedial action technique and verification and documentation of its success.

L22 ANSWER 11 OF 23 MEDLINE on STN

2001023046. PubMed ID: 10885561. Cytomegalovirus-infected neuroblastoma cells exhibit augmented invasiveness mediated by betalalpha5 integrin (VLA-5). Scholz M; Blaheta R A; Wittig B; Cinatl J; Vogel J U; Doerr H W; Cinatl J Jr. (Interdisciplinary Laboratory of the Institute for Medical Virology, Johann Wolfgang Goethe University, Frankfurt am Main, Germany.. m.scholz@em.uni-frankfurt.de) . Tissue antigens, (2000 May) Vol. 55, No. 5, pp. 412-21. Journal code: 0331072. ISSN: 0001-2815. Pub. country: Denmark. Language: English.

AB Previously, experimental in vivo results showed that the productively and persistently human cytomegalovirus (HCMV)-infected neuroblastoma cell line UKF-NB-4AD169 exhibits a more malignant phenotype than the non-infected variant UKF-NB-4. To prove the assumption that enhanced malignancy may be due to enhanced invasive potential of the infected cells we studied interactions of both lines with monolayers of cultured endothelial cells. UKF-NB-4AD169 cells adhered to and transmigrated through endothelial monolayer to a significantly higher extent compared with UKF-NB4. Furthermore, the adhesion of UKF-NB-4AD169 but not of UKF-NB4 resulted in focal disruption of the monolayer integrity which facilitates tumor cell transmigration. Blocking antibodies directed against the beta1 integrin chain as well as beta1alpha5 on the tumor cells specifically inhibited adhesion in a concentration-dependent manner. When UKF-NB-4 were pretreated with a beta1 integrin activating antibody, focal disruption of the endothelial integrity also occurred. These findings lead us to suggest that HCMV infection activates beta1alpha5 in the host neuroblastoma cell which in turn enables these cells to tightly adhere to endothelial cells. In the presence of the protease inhibitor phenantroline, beta1alpha5-mediated adhesion was not impaired whereas UKF-NB4AD169-mediated endothelial monolayer permeabilization was dose dependently inhibited. We conclude that human cytomegalovirus infection contributes to augmented neuroblastoma invasiveness via adhesion of activated beta1alpha5 and subsequent matrix digestion by proteases.

L22 ANSWER 12 OF 23 MEDLINE on STN

1998278402. PubMed ID: 9617840. Development of an ultrasensitive in vitro assay to monitor growth of primary cell cultures with reduced mitotic activity. Blaheta R A; Kronenberger B; Woitaschek D; Weber S; Scholz M; Schuldes H; Encke A; Markus B H. (Department of General Surgery, Johann Wolfgang Goethe-University, Frankfurt am Main, Germany.. blaheta@em.uni-frankfurt.de) . Journal of immunological methods, (1998 Feb 1) Vol. 211, No. 1-2, pp. 159-69. Journal code: 1305440. ISSN: 0022-1759. Pub. country: Netherlands. Language: English.

AB Primary cell cultures, such as isolated epithelial cells, neuronal cells, or hepatocytes are characterized by a very low mitotic activity. Monitoring of small changes in cell numbers requires staining with a DNA-specific dye with an extremely high sensitivity and a low inter- and intraassay variability. For this purpose, an ultrasensitive in vitro assay has been developed based on the fluorescent nucleic acid stain PicoGreen. PicoGreen has been shown to detect as little as 0.5 ng pure DNA or 10(2) cells (interassay SD < 10%, intraassay SD < 5%). This is far above the limit of sensitivity of conventional fluorochromes, such as Hoechst 33342 or propidium iodide. To obtain optimum efficacy of PicoGreen, cells were digested with papain for 20 h at 60 degrees C prior to staining. Under these conditions, the slope factor was calculated to be 0.105 relative fluorescence units (RFU)/cell, which is far superior to the slope factor of Hoechst 33342 (0.0137 RFU/cell) or propidium iodide (0.0077 RFU/cell). Analysis of the blank values revealed a very low autofluorescence of PicoGreen, which is only 1/50th of the autofluorescence of Hoechst 33342 and 1/5th of the autofluorescence of propidium iodide. Additional coating of the culture plates with extracellular matrix proteins to prevent cellular dedifferentiation did not influence the high sensitivity of PicoGreen. In conclusion, the PicoGreen-assay seems to be the method of choice when the growth capacity of primary cell cultures needs to be analyzed with high accuracy.

L22 ANSWER 13 OF 23 MEDLINE on STN

1998226490. PubMed ID: 9566838. Dedifferentiation of human hepatocytes by extracellular matrix proteins in vitro: quantitative and qualitative investigation of cytokeratin 7, 8, 18, 19 and vimentin

filaments. Blaheta R A; Kronenberger B; Woitaschek D; Auth M K; Scholz M; Weber S; Schuldes H; Encke A; Markus B H. (Department of General Surgery, Hospital of the Johann Wolfgang Goethe-University, Frankfurt am Main, Germany.. Blaheta@em.uni-frankfurt.de) . Journal of hepatology, (1998 Apr) Vol. 28, No. 4, pp. 677-90. Journal code: 8503886. ISSN: 0168-8278. Pub. country: Denmark. Language: English.

AB BACKGROUND/AIMS: Liver cirrhosis and carcinogenesis are accompanied by an alteration in extracellular matrix material. Histological studies reveal upregulation of the intermediate filaments cytokeratins 8 and 18 and de novo synthesis of vimentin, and cytokeratin 7 or 19 in hepatocytes. The aim of this study was to investigate how these two processes are linked. METHODS: Human hepatocytes were seeded: (i) on the matrix components collagen I, IV, laminin, or fibronectin; (ii) on stoichiometrically different complete matrices, derived from human placenta (matrix I) or the Englebreth-Holm-Swarm tumor (matrix II), and (iii) inside a three-dimensional collagen I sandwich. Filament expression and assembly were measured by cytofluor analysis or confocal laserscan microscopy. RESULTS: The matrix components or complete matrices triggered enhancement of cytokeratins 8 and 18 and de novo synthesis of cytokeratins 7, 19 and vimentin in a characteristic way. Confocal images demonstrated a dense and uniform network of cytokeratin 18 in freshly isolated cells, which was "replaced" by a few, thick protein bundles within 20 days. Interestingly, newly synthesized cytokeratin 19 structurally resembled the cytokeratin 19 organization in biliary epithelial cells. Marked cytokeratin alterations could be partially prevented when hepatocytes were grown in a three-dimensional collagen sandwich. CONCLUSIONS: Pathological alterations to the chemical composition, molecular structure, or spatial arrangement of the liver matrix lead to specific changes in the intermediate filament pattern in human hepatocytes. We assume that degradation of the matrix results in pathological alterations to the hepatocyte-receptor matrix-ligand ratio, followed by a switch from physiological to pathological cell-activation.

L22 ANSWER 14 OF 23 MEDLINE on STN

91287444. PubMed ID: 2062151. In search of missing links in otology. I. Development of a collagen-based biomaterial. Goycoolea M V; Muchow D C; Scholz M T; Sirvio L M; Stypulkowski P H. (Minnesota Ear Head and Neck Clinic, Department of Otolaryngology, University of Minnesota, Minneapolis.) The Laryngoscope, (1991 Jul) Vol. 101, No. 7 Pt 1, pp. 717-26. Journal code: 8607378. ISSN: 0023-852X. Pub. country: United States. Language: English.

AB Experiments leading to the development and use of a biomaterial based on reconstituted collagen for use in tympanoplasty are presented. A stable, even membrane with optimal strength and an organized matrix of collagen protein strands has been obtained. Biocompatibility was documented by subcutaneous implantation, cytotoxicity with agar overlay, cell contact, and cell-growth inhibition studies. Experimental grafting in chinchillas with perforated tympanic membranes demonstrated that the collagen membrane performed well in all cases. Histopathological studies in chinchillas showed that the collagen membrane compared favorably with fascia grafts. Of significance is that: 1. The membrane has a matrix of microperforations that enhance tissue ingrowth, allow stable anchoring, and permit aeration of the middle ear cavity. 2. The membranes obtained are not exposed to aldehyde cross-linking; therefore, tissue reaction due to aldehydes is avoided.

L22 ANSWER 15 OF 23 BIOSIS on STN

2000:282492 Document No.: PREV200000282492. Maintaining cells for an extended time by entrapment in a contracted matrix. Hu, Wei-Shou [Inventor, Reprint author]; Cerra, Frank Bernard [Inventor]; Nyberg, Scott

Lyle [Inventor]; Scholz, Matthew Thomas [Inventor]; Shatford, Russell A. [Inventor]. Minneapolis, MN, USA. ASSIGNEE: Regents of the University of Minnesota, Minneapolis, MN, USA. Patent Info.: US 5981211 19991109. Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 9, 1999) Vol. 1228, No. 2. e-file.
CODEN: OGUPE7. ISSN: 0098-1133. Language: English.

AB Methods of maintaining animal cells for product production, for supporting hepatocyte function and viability to treat a patient suffering from hepatic failure and for preserving tissue-specific function of mammalian cells are carried out with a bioreactor containing a feed and waste chamber and a cell chamber separated by a selectively permeable membrane. Within the cell chamber, a biocompatible contracted three-dimensional gel matrix entraps animal cells or genetic modifications thereof, and a liquid phase contains a concentrated solution of the cell product. The bioreactor uses only two chambers to achieve three distinct zones within the bioreactor. The bioreactor can be of either hollow fiber or flat-bed configuration. In the configuration using hollow fibers, the two fluid paths correspond to the cavity surrounding the hollow fibers (the extracapillary space), and to the lumens of the hollow fibers themselves. Both fluid paths have inlet and outlet ports. Communication between the two fluid paths is across the permeable medium--the hollow fiber material. To prepare a bioartificial liver, hepatocytes are inoculated into the hollow fibers in a solution which quickly forms a highly porous gel. The gel subsequently contracts, leaving an open channel within the hollow fiber adjacent to the gel core entrapped hepatocytes. This channel can be perfused with nutrient media for hepatocytes. The channel can also serve as a waste stream to remove toxins that the hepatocytes have modified to a water soluble form.

L22 ANSWER 16 OF 23 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1998:145837 Document No.: PREV199800145837. Influence of extracellular matrix proteins on cytokeratin 7, 8, 18, 19 and vimentin filaments in human hepatocytes. Blaheta, Roman A.; Kronenberger, Bernd; Woitaschek, Dirk; Scholz, Martin; Weber, Stephan; Encke, Albrecht; Markus, Bernd H.. Dep. General Surg., Hosp. Johann Wolfgang Goethe-Univ., D-60590 Frankfurt am Main, Germany. European Journal of Cell Biology, (1997) Vol. 74, No. SUPPL. 47, pp. 13. print.
Meeting Info.: 42nd International Congress of the European Tissue Culture Society (ETCS). Mainz, Germany. October 12-15, 1997. European Tissue Culture Society.
CODEN: EJCBDN. ISSN: 0171-9335. Language: English.

L22 ANSWER 17 OF 23 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1995:384455 Document No.: PREV199598398755. Change of cytokeratin pattern in human hepatocytes cultured on different extracellular matrices: Possible relevance for cell transplantation. Kronenberger, B.; Blaheta, R. A.; Scholz, M.; Encke, A.; Markus, B. H.. J.W. Goethe Univ., Dep. Gen. Surgery, Frankfurt, Germany. 9TH INTERNATIONAL CONGRESS OF IMMUNOLOGY. (1995) pp. 650. The 9th International Congress of Immunology. Publisher: 9th International Congress of Immunology, San Francisco, California, USA.
Meeting Info.: Meeting Sponsored by the American Association of Immunologists and the International Union of Immunological Societies. San Francisco, California, USA. July 23-29, 1995.
Language: English.

L22 ANSWER 18 OF 23 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1999:637231 The Genuine Article (R) Number: 227NT. Cytomegalovirus infection as a possible progression factor in neuroblastoma disease. Scholz

M; Blaheta R A; Hundemer M; Doerr H W; Cinatl J (Reprint). Univ Frankfurt, Inst Med Virol, Sandhofstr 2-4, D-60528 Frankfurt, Germany (Reprint); Univ Frankfurt, Inst Med Virol, D-60528 Frankfurt, Germany; Univ Frankfurt, Klin Kinderheilkunde, Interdisziplinares Lab, D-60590 Frankfurt, Germany; Univ Frankfurt, Klin Allgemein & Gefasschirurg, D-60590 Frankfurt, Germany. KLINISCHE PADIATRIE (JUL-AUG 1999) Vol. 211, No. 4, pp. 310-313. ISSN: 0300-8630. Publisher: GEORG THIEME VERLAG KG, RUDIGERSTR 14, D-70469 STUTTGART, GERMANY. Language: German. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB Background: There is evidence that the infection with human cytomegalovirus is clinically associated with enhanced metastasis and progression of neuroblastoma disease, An in vitro model with HCMV-infected neuroblastoma cells (NB) was used to investigate whether HCMV modulates the metastatic potential of NB.

Methods: The neuroblastoma cell line UKF-NB-4 and its productively and persistently HCMV-infected variant UKF-NB-4(AD169) were cocultured with human endothelial cells (EC). The rate of NB adherent to the endothelial monolayer and the rate of transmigrating NB was determined by means of combined reflexion interference contrast/phase contrast microscopy.

Results: UKF-NB-4(AD169) adhered to and transmigrated through cocultured EC monolayer to a significantly higher extent compared with the non-infected cell line UKF-NB-4, At the cell-to-cell contact sites between UKF-NB-4(AD169) and EC the intercellular endothelial contacts loosened resulting in the formation of reversible focal openings in the monolayer. This phenomenon was not observed with UKF-NB-4. The transendothelial migration rate of UKF-NB-4(AD169) was therefore significantly higher than that of UKF-NB-4, The formation of focal openings in the endothelial monolayer and the enhanced transmigration rate of UKF-NB-4(AD169) was suppressed in the presence of phenantroline, suggesting that HCMV-induced proteinases might be responsible for this phenomenon.

Conclusion: The results confirm our assumption that HCMV has the ability to modulate functional properties of NB which are essential for the interactions with endothelial cells and thus for metastasation. The clinical relevance of these findings has to be further defined yet by means of prospective studies with HCMV-infected neuroblastoma patients, Proteinase inhibitors could be valuable in the therapeutic treatment of these patients.

L22 ANSWER 19 OF 23 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

1997:862736 The Genuine Article (R) Number: YG407. Influence of extracellular matrix proteins on cytokeratin 7, 8, 18, 19 and vimentin filaments in human hepatocytes.. Blaheta R A (Reprint); Kronenberger B; Woitaschek D; Scholz M; Weber S; Encke A; Markus B H. UNIV FRANKFURT KLINIKUM, DEPT GEN SURG, D-60590 FRANKFURT, GERMANY. EUROPEAN JOURNAL OF CELL BIOLOGY (1997) Vol. 74, Supp. [47], pp. 19-19. ISSN: 0171-9335. Publisher: WISSENSCHAFTLICHE VERLAG MBH, BIRKENWALDSTRASSE 44, POSTFACH 10 10 61, 70009 STUTTGART, GERMANY. Language: English.

L22 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

2003:356741 Document No. 138:376518 Methods for producing thin film on ASIC (TFA) image sensors and the TFA image sensors. Scholz, Markus; Rieve, Peter; Wagner, Michael; Lule, Tarek; Seibel, Konstantin; Prima, Jens; Benthien, Stephan; Sommer, Michael (Silicon Vision A.-G., Germany). PCT Int. Appl. WO 2003038901 A1 20030508, 28 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI,

FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (German). CODEN: PIXXD2. APPLICATION: WO 2002-DE3964 20021021. PRIORITY: DE 2001-10152325 20011026.

AB Methods for producing a TFA image sensor in which a multi-layer arrangement comprising a photodiode matrix is arranged on an ASIC switching circuit provided with electronic circuits for operating the TFA image sensor, such as pixel electronics, peripheral electronics and system electronics, for the pixel-wise conversion of electromagnetic radiation into an intensity-dependent photocurrent, the pixels being connected to contacts of the underlying pixel electronics of the ASIC switching circuit are described in which the CMOS passivation layer in the photoactive region and then the upper CMOS metallisation are removed and replaced by a metallic layer which is structured in the pixel raster, for the formation of back electrodes, after which the photodiode matrix is applied and structured as a pixel matrix. The methods enable conventionally produced ASIC switching circuits to be used without impairing the topog. of the photoactive sensor surface. A passivating protective layer and/or a color filter layer having a passivating action can be applied on the photodiode matrix. TFA image sensors havoing the structures produced by the methods are also described.

L22 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

1990:196668 Document No. 112:196668 Bioreactor. Hu, Wei Shou; Scholz, Matthew T. (University of Minnesota, USA). PCT Int. Appl. WO 8911529 A1 19891130, 70 pp. DESIGNATED STATES: W: JP, KR; RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1989-US2228 19890519. PRIORITY: US 1988-197700 19880523.

AB A bioreactor apparatus is described for maintaining animal cells for continuous production of various cell products. It consists of two chambers, a feed and waste chamber and cell chamber separated by a selectively permeable ultrafiltration membrane. Within the cell chamber, a biocompatible three dimensional matrix entraps the animal cells. Due to the presence of this biocompatible matrix, the cell chamber generally has a gel phase, i.e., the biocompatible matrix and cells, and a liquid phase containing a concentrated solution of the cell product to be harvested. Thus, the bioreactor of this invention uses only two chambers to achieve three distinct zones within the apparatus The bioreactor was successfully used for cultivation of 293 cells (human kidney epithelial cells), human fibroblasts, Chinese hamster ovary cells, and AFP-27 hybridoma cells.

L22 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

1970:534085 Document No. 73:134085 Original Reference No. 73:21839a,21842a MO [molecular orbital] calculations on heterocycles. 4. Influence of charge termsin the Hamilton diagonal-matrix of self-consistent methods on the calculation of π-electron densities and bond lengths. Heidrich, Dietmar; Scholz, Manfred (Sekt. Chem., Karl Marx-Univ., Leipzig, Fed. Rep. Ger.). Monatsh. Chem., 101(5), 1394-1402 (German) 1970. CODEN: MOCHAP.

AB The simple SCβ and SCα,β MO methods (SC = self-consistent) of D. Heidrich and M. Scholz (1969) give π-electron ds. and bond lengths for N-heterocycles (pyrrole and pyridine series) that agree well with those determined with extended π-electron SCF Pariser-Parr-Pople-type calcns.

L22 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

1969:99720 Document No. 70:99720 Original Reference No. 70:18659a,18662a Self-consistent method based on Hueckel's M.O. model. II. Heidrich, Dietmar; Scholz, Manfred (Karl-Marx-Univ. Leipzig, Leipzig, Fed. Rep. Ger.). Zeitschrift fuer Chemie, 9(3), 87-98 (German) 1969.

CODEN: ZECEAL. ISSN: 0044-2402.
AB Self-consistent methods based on the Hueckel M.O. model are reviewed with 73 references. The theoretical basis and usefulness of SCβ methods are discussed and the methods are compared with the Pople Frs matrix elements. Also, theoretical considerations of SCα,β methods are discussed and SCα,β calcns. are compared with the results obtained with other SC methods.

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L23 927704 CARRIER

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L24 28 L23 AND SOLUBLE MATRIX

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L25 2 L24 AND ANTIGEN

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L26 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
2005:975659 Document No. 143:254039 Formulation of leukocyte-stimulation matrixes for vaccination and the determination of T-cell subtypes. Scholz, Martin (Leukocare GmbH, Germany). Eur. Pat. Appl. EP 1571204 A1 20050907, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK. (German). CODEN: EPXXDW. APPLICATION: EP 2004-5177 20040304.
AB The invention concerns leukocyte-stimulation matrix and/or the induction of immunotolerance by using (a) one or more carriers; (b) a soluble matrix for embedding one or more components for leukocyte-stimulation and/or induction of immunotolerance; (c) one or more components for leukocyte-stimulation and/or induction of immunotolerance that are embedded in the soluble matrix. Further ingredients are coupling agents for binding the carrier with the components for leukocyte-stimulation and/or induction of immunotolerance. Typical stimulating agents are antigens, MHC antigens, cell debris, viruses, etc. Polyurethane, polystyrene, and medical metals, glasses, natural products are the carriers. As coupling agents bromocyan, agarose, silane, etc. are used; matrixes are starch, cellulose, glycogen, polyethylene glycol.

L26 ANSWER 2 OF 2 MEDLINE on STN
93271203. PubMed ID: 8499465. Two yeast peroxisomal proteins crossreact with an antiserum against human sterol carrier protein 2 (SCP-2). Tahotna D; Hapala I; Zinser E; Flekl W; Paltauf F; Daum G. (Institut fur Biochemie und Lebensmittelchemie, Technische Universitat Graz, Austria.) Biochimica et biophysica acta, (1993 May 14) Vol. 1148, No. 1, pp. 173-6. Journal code: 0217513. ISSN: 0006-3002. Pub. country: Netherlands. Language: English.
AB An antibody raised against human sterol carrier protein 2 (SCP-2) crossreacts with two yeast peroxisomal proteins. These proteins have apparent molecular weights of 35 and 58 kDa. Subfractionation of peroxisomes revealed that the 58 kDa species is a soluble matrix protein, whereas the 35 kDa protein is membrane bound. Treatment of isolated peroxisomal membranes with 0.25 M KCl released the 35 kDa crossreactive protein into the soluble supernatant. However, lipid transfer activity could be attributed neither to the 35 kDa nor to the 58

kDa protein.

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NEWS 12	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 13	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
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NEWS 15	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 16	JAN 02	STN pricing information for 2008 now available
NEWS 17	JAN 16	CAS patent coverage enhanced to include exemplified

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                  prophetic substances
 NEWS 18  JAN 28  USPATFULL, USPAT2, and USPATOLD enhanced with new
                  custom IPC display formats
 NEWS 19  JAN 28  MARPAT searching enhanced
 NEWS 20  JAN 28  USGENE now provides USPTO sequence data within 3 days
                  of publication
 NEWS 21  JAN 28  TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 22  JAN 28  MEDLINE and LMEDLINE reloaded with enhancements
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 NEWS 24  FEB 20  PCI now available as a replacement to DPCI
 NEWS 25  FEB 25  IFIREF reloaded with enhancements
 NEWS 26  FEB 25  IMSPRODUCT reloaded with enhancements
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                  U.S. National Patent Classification


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=> s soluble matrix
L1        1129 SOLUBLE MATRIX

=> s l1 and stimulat?
L2         105 L1 AND STIMULAT?
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=> s l2 and leukocyte
L3           7 L2 AND LEUKOCYTE

=> dup remove l3
PROCESSING COMPLETED FOR L3
L4           3 DUP REMOVE L3 (4 DUPLICATES REMOVED)

=> d l4 1-3 cbib abs

L4   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
2005:975659   Document No. 143:254039  Formulation of leukocyte-
     stimulation matrixes for vaccination and the determination of
     T-cell subtypes.  Scholz, Martin (Leukocare GmbH, Germany).  Eur. Pat.
     Appl. EP 1571204 A1 20050907, 15 pp.  DESIGNATED STATES: R:  AT, BE, CH,
     DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI,
     RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK.  (German).  CODEN: EPXXDW.
     APPLICATION: EP 2004-5177 20040304.
AB   The invention concerns leukocyte-stimulation matrix
     and/or the induction of immunotolerance by using (a) one or more carriers;
     (b) a soluble matrix for embedding one or more components
     for leukocyte-stimulation and/or induction of
     immunotolerance; (c) one or more components for leukocyte-
     stimulation and/or induction of immunotolerance that are embedded
     in the soluble matrix.  Further ingredients are coupling
     agents for binding the carrier with the components for leukocyte
     -stimulation and/or induction of immunotolerance.  Typical
     stimulating agents are antigens, MHC antigens, cell debris,
     viruses, etc.  Polyurethane, polystyrene, and medical metals, glasses,
     natural products are the carriers.  As coupling agents bromocyan, agarose,
     silane, etc. are used; matrixes are starch, cellulose, glycogen,
     polyethylene glycol.

L4   ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
2002:263765   Document No. 137:168129  Increased release of matrix
     metalloproteinase-9 in the plasma of acute severe asthmatic patients.
     Belleguic, C.; Corbel, M.; Germain, N.; Lena, H.; Boichot, E.; Delaval, P.
     H.; Lagente, V. (Faculte des Sciences Pharmaceutiques et Biologiques,
     Universite de Rennes, Rennes, 35043, Fr.).  Clinical and Experimental
     Allergy, 32(2), 217-223 (English) 2002.  CODEN: CLEAEN.  ISSN: 0954-7894.
     Publisher: Blackwell Publishing Ltd..
AB   Background Matrix metalloproteinases (MMPs) are likely to be relevant
     mediators of the extracellular matrix (ECM) degradation and airway
     remodelling.  Objective We have compared the levels of MMPs, eotaxin and
     soluble interleukin 2 receptor (IL-2R) in the plasma of healthy subjects,
     atopic patients and asthmatic patients.  Methods The asthmatic patients
     were separated into two groups, either well controlled on inhaled therapy or
     acute severe asthma.  Patients with acute severe disease had all received
     systemic corticosteroids from 12 to 48 h before the blood was taken.
     Blood was recovered in EDTA tubes, incubated with either fMLP, PMA or
     vehicle for 10 min and centrifuged.  MMP-9, TIMP-1, IL-2R and eotaxin
     levels were measured in the plasma by ELISA.  Moreover, the activity of
     MMPs was also evaluated by zymog.  Results An increased basal level of
     MMP-9 and IL2-R was observed in acute severe asthma.  Following
     stimulation with fMLP and PMA there was an enhanced production of
     MMP-9 in the plasma of all groups of patients.  However, the MMP-9 level
     was significantly enhanced in acute severe asthma, compared with the
     others.  No difference was found for the TIMP-1 level between the
     patients.  The eotaxin level in plasma was found to be significantly lower
     in acute severe asthmatics compared with the others groups.  Zymog.
     technique showed a significant increased activity of MMP-9 (92 kDa) but
     not MMP-2 (66 kDa) in the plasma of patients with acute asthma.
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Conclusion The increased in MMP-9 production and activity observed in the present
study suggests a process of extracellular matrix degradation in acute severe asthmatic patients and proposes MMP-9 as a non-invasive systemic marker of inflammation and airway remodelling in asthma.

L4 ANSWER 3 OF 3 MEDLINE on STN DUPLICATE 1
95399781. PubMed ID: 7545470. Production of chemokines, interleukin-8 and monocyte chemoattractant protein-1, during monocyte: endothelial cell interactions. Lukacs N W; Strieter R M; Elner V; Evanoff H L; Burdick M D; Kunkel S L. (Department of Pathology, University of Michigan Medical School, Ann Arbor 48109-0602, USA.) Blood, (1995 Oct 1) Vol. 86, No. 7, pp. 2767-73. Journal code: 7603509. ISSN: 0006-4971. Pub. country: United States. Language: English.

AB The extravasation of leukocytes from the lumen of the vessel to a site of inflammation requires specific binding events. The interaction of leukocytes with endothelium, via specific receptors, may provide intracellular signals that activate extravasating cells. In the present study, we have investigated the production of chemokines, interleukin-8 (IL-8), and monocyte chemoattractant protein-1 (MCP-1) during monocyte: endothelial cell interactions. Both unstimulated and interferon-gamma (IFN-gamma)-prestimulated human umbilical vein endothelial cells (HUVEC) produced low constitutive levels of IL-8 and MCP-1. The addition of enriched monocytes with unstimulated HUVEC resulted in synergistic increases in production of both IL-8 and MCP-1. Monocytes cultured with IFN-gamma-preactivated HUVECs demonstrated little additional increase in IL-8 and MCP-1 production in coculture assays compared with unstimulated HUVEC. Northern blot analysis paralleled the protein data, demonstrating upregulated expression of IL-8 and MCP-1 mRNA in stimulated and unstimulated coculture assays. Culture of enriched monocytes and endothelial cells in transwells demonstrated no increases in IL-8 or MCP-1, indicating the necessity for cellular contact for chemokine production. In previous investigations, we have demonstrated that increased monocyte-derived MIP-1 alpha production was induced by intracellular adhesion molecule-1 (ICAM-1) interactions on activated HUVECs. In contrast, addition of anti-ICAM-1 monoclonal antibodies (MoAbs) did not diminish the production of IL-8 and MCP-1 in the present study. Furthermore, neither antibodies to IL-1 nor tumor necrosis factor (TNF) diminished the production of either IL-8 or MCP-1. However, when soluble matrix proteins were added to the coculture to block cellular interactions, the chemokine protein and mRNA levels were significantly decreased. IL-8 production was decreased by both soluble collagen and fibronectin, whereas MCP-1 was decreased by only soluble collagen, suggesting differential activation pathways. These results indicate that IL-8 and MCP-1 production are increased during monocyte and endothelial cell interactions in part due to matrix protein binding mechanisms. This mechanism may serve a role in cell activation, production of chemokines, as well as extravasation and recruitment of additional leukocytes during inflammatory responses.

=> sl1 and immune tolerance
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"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and immune toleraance
L5 0 L1 AND IMMUNE TOLERAANCE

=> s l1 and immune tolerance
L6 1 L1 AND IMMUNE TOLERANCE

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=> d l6 cbib abs

L6   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
2005:975659   Document No. 143:254039  Formulation of leukocyte-stimulation
     matrixes for vaccination and the determination of T-cell subtypes.
     Scholz, Martin (Leukocare GmbH, Germany).  Eur. Pat. Appl. EP 1571204 A1
     20050907, 15 pp.  DESIGNATED STATES: R:  AT, BE, CH, DE, DK, ES, FR, GB,
     GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR,
     BG, CZ, EE, HU, PL, SK.  (German).  CODEN: EPXXDW.  APPLICATION: EP
     2004-5177 20040304.
AB   The invention concerns leukocyte-stimulation matrix and/or the induction
     of immunotolerance by using (a) one or more carriers; (b) a soluble
     matrix for embedding one or more components for
     leukocyte-stimulation and/or induction of immunotolerance; (c) one or more
     components for leukocyte-stimulation and/or induction of immunotolerance
     that are embedded in the soluble matrix.  Further
     ingredients are coupling agents for binding the carrier with the
     components for leukocyte-stimulation and/or induction of immunotolerance.
     Typical stimulating agents are antigens, MHC antigens, cell debris,
     viruses, etc.  Polyurethane, polystyrene, and medical metals, glasses,
     natural products are the carriers.  As coupling agents bromocyan, agarose,
     silane, etc. are used; matrixes are starch, cellulose, glycogen,
     polyethylene glycol.


=> s l1 and polyethylene glycol
L7          24 L1 AND POLYETHYLENE GLYCOL

=> s l7 and cytokine
L8           0 L7 AND CYTOKINE

=> s l7 and starch
L9           2 L7 AND STARCH

=> dup remove l9
PROCESSING COMPLETED FOR L9
L10           2 DUP REMOVE L9 (0 DUPLICATES REMOVED)

=> d l10 1-2 cbib abs

L10  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
2005:975659   Document No. 143:254039  Formulation of leukocyte-stimulation
     matrixes for vaccination and the determination of T-cell subtypes.
     Scholz, Martin (Leukocare GmbH, Germany).  Eur. Pat. Appl. EP 1571204 A1
     20050907, 15 pp.  DESIGNATED STATES: R:  AT, BE, CH, DE, DK, ES, FR, GB,
     GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR,
     BG, CZ, EE, HU, PL, SK.  (German).  CODEN: EPXXDW.  APPLICATION: EP
     2004-5177 20040304.
AB   The invention concerns leukocyte-stimulation matrix and/or the induction
     of immunotolerance by using (a) one or more carriers; (b) a soluble
     matrix for embedding one or more components for
     leukocyte-stimulation and/or induction of immunotolerance; (c) one or more
     components for leukocyte-stimulation and/or induction of immunotolerance
     that are embedded in the soluble matrix.  Further
     ingredients are coupling agents for binding the carrier with the
     components for leukocyte-stimulation and/or induction of immunotolerance.
     Typical stimulating agents are antigens, MHC antigens, cell debris,
     viruses, etc.  Polyurethane, polystyrene, and medical metals, glasses,
     natural products are the carriers.  As coupling agents bromocyan, agarose,
     silane, etc. are used; matrixes are starch, cellulose, glycogen,
     polyethylene glycol.
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L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
2003:652756 Document No. 139:202478 Preparation of the lysozyme-containing topical nourishing gel for pudendum. Ling, Peixue; Liu, Aihua; Zhang, Hua; Chen, Jianying; Sun, Maoli (Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1372974 A 20021009, 6 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 2001-107864 20010302.

AB The water-soluble or oily gelling agent for nourishing pudenda is composed of 0.1-5% lysozyme and 50-99.9% matrix, and adjuvant (such as antiviral agent, antibacterial agent, trichomonas-killing agent, antiseptic, lubricant, refrigerant, deodorant, etc). Lysozyme with mol. weight of 10-35 kDa is isolated from fowl ovalbumin, animal or vegetable tissue, or animal or vegetable secretion. The water-soluble matrix is water, glycerol, propanediol, cellulose derivative, alginate, Na hyaluronate, chitosan, starch, karaya gum, tragacanth, gelatin, carbomer, polyethylene glycol, and/or polyvinylpyrrolidone, etc. The oily matrix is liquid paraffin, polyethylene glycol, fatty oil, silicone gel, Al soap, and/or Zn soap. The antibacterial agent is clotrimazole, miconazole, terbinafine, total alkaloid of Snophora flavescens, cortex dictam, propolis, etc. The antiviral agent is acyclovir, ribavirin, interferon, etc. The trichomonas-killing agent is metronidazole, tinidazole, etc. The antiseptic is chloroform, KMnO4, H3BO3, etc. The lubricant is the hydrogenated cotton seed oil, hydrogenated castor oil, Tween, Span, Na dodecyl sulfate, etc.

=> s polyethylene glycol
L11 185819 POLYETHYLENE GLYCOL

=> s l11 and starch
L12 4805 L11 AND STARCH

=> s l12 and weight percent
L13 1 L12 AND WEIGHT PERCENT

=> d l13 cbib abs

L13 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
2004:11235 Document No. 140:271856 Application of tannin and starch as crosslinker in modification of polyurethane. Ge, Jinjie; Wu, Rui; Shi, Xinghai; Liu, Yingjun; Wang, Min (The Key laboratory of Molecular Engineering of Polymers, Department of Macromolecular Science, Fudan University, Shanghai, 200433, Peop. Rep. China). Gaofenzi Xuebao (6), 809-815 (Chinese) 2003. CODEN: GAXUE9. ISSN: 1000-3304. Publisher: Kexue Chubanshe.

AB A series of casting films of starch and tannin-based polyurethane were prepared and the effect of tannin and starch amts. on the properties of polyurethane was investigated. When tannin was added, the thermal behavior and mech. properties of films were improved, especially when the content of tannin reached 60% (weight percent in biomass), tannin and the network of starch-based polyurethane interpenetrated and showed good miscibility. Its integral procedural decomposition temperature (IPDT) was 375°, its tensile strength and Young's modulus were 51.9 MPa and 308.4 MPa, resp. The results indicated that tannin had great effect on the d. of crosslinking, miscibility of components and the morphol. of starch polyurethane. The degradation test in phosphate buffer solns. showed that tannin could adjust the speed of starch polyurethane degradation to some extent.

=> s l11 and cellulose
L14 12300 L11 AND CELLULOSE

=> s l14 and weight percent
L15 9 L14 AND WEIGHT PERCENT

=> dup remove l15
PROCESSING COMPLETED FOR L15
L16 9 DUP REMOVE L15 (0 DUPLICATES REMOVED)

=> d l16 1-9 cbib abs

L16 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2007:509857 Document No. 146:468630 Solid oral forms of ebastine. Roma Millan, Jordi; Mestre Castell, Jose; Sune Negre, Jose (Simbec Iberica, Sl, Spain). PCT Int. Appl. WO 2007051877 A1 20070510, 25pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Spanish). CODEN: PIXXD2. APPLICATION: WO 2006-ES581 20061020. PRIORITY: ES 2005-2686 20051104.
AB The invention relates to compns. in the form of matrixes consisting of solid ebastine dispersions in non-ionic surfactants having a HLB of between 10 and 20 and a m.p. of between 30° C and 70° C. The invention also relates to solid oral pharmaceutical forms of ebastine containing said matrixes, particularly tablets, and having good solubility and bioavailability properties and improved stability. The composition contains 10% to 90% ebastine (weight percent) and 10% to 90% of one or more non-ionic surfactants. The surfactant may be selected from the following group: Gelucire 50/13 and 44/14, polysorbate 61 and 65, Brij 58 and 76, Myrj 59, Hodag 154-S (PEG 32 distearate) and 602-S (PEG 150 distearate). The tablet formulation contains a solid matrix of 30-50 mg containing 30% and 70% dispersed ebastine in a non-ionic surfactant or a mixture of surfactants, 150-300 mg microcryst. cellulose, 2-7 mg of sodium glycolate and 0.5-1.5 mg of magnesium stearate.

L16 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2006:613484 Document No. 145:169399 detergent for functional underwear. Luan, Fengxiang (Tianjin Qida Science and Technology Development Co., Ltd., Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1789397 A 20060621, 7 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 2010-93919 20041214.
AB The title functional detergent for underwear is prepared from (by wt . percents) linear sodium dodecylbenzenesulfonate 5-15; nonylphenol polyoxyethylene ether 2-5; micropowder mixture of montmorillonite, tourmaline, IR stone and medical stone (maifan stone) 3-10; kathon 0.1-0.5, fluorescent whitener 0.1-0.5, sodium CM-cellulose 0.1-0.5, sodium tripolyphosphate 0-5, 1 sodium chloride 1-5, pure water 65-80, and essence and dye in trace amount

L16 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2006:1119989 Document No. 146:32284 Studies on cellulose acetate/low cyclic dimer polysulfone blend ultrafiltration membranes and their applications. Arthanareeswaran, G.; Latha, C. S.; Mohan, D.; Raajenthiren, M.; Srinivasan, K. (Membrane Laboratory, Department of Chemical Engineering, A.C. College of Technology, Anna University, Chennai, India). Separation Science and Technology, 41(13), 2895-2912 (English) 2006. CODEN: SSTEDS. ISSN: 0149-6395. Publisher: Taylor & Francis, Inc..

AB Flat sheet ultrafiltration membranes of cellulose acetate (CA)/low cyclic dimer polysulfone (LCD PSf) were prepared using a phase inversion method. N,N'-dimethylformamide and polyethylene glycol (PEG 200, PEG 400, PEG 600) of different mol. weight were used as solvent and pore-forming additives, resp. Membranes were characterized in terms of pure water flux, water content, porosity, hydraulic resistance, and morphol. Pure water flux reached the highest value of 181.82 L/m2-h at 5 weight percent PEG 600 and 10 weight percent LCD PSf content in the membrane preparation blended solution SEM micrographs indicated that adding PEG into the CA/LCD PSf solution changed the inner membrane structure. The effect of filtration time and applied pressure on membrane permeability was examined by copper/polyethylenimine complex rejection studies. With increased filtration time, rejection of the copper/polyethylenimine complex decreased; results are discussed.

L16 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2005:983621 Document No. 143:272625 Embolization using polymer particles. Dicarlo, Paul; Casey, Thomas V.; Mangin, Stephan P. (USA). U.S. Pat. Appl. Publ. US 2005196449 A1 20050908, 18 pp. (English). CODEN: USXXCO. APPLICATION: US 2004-791552 20040302.
AB Embolization, as well as related polymer particles, compns., and methods, are disclosed. A particle comprises an interior region and a surface region, a percent of a first polymer in the interior region being less than a weight percent of the first polymer at the surface region. A particle diameter is of about 10 to about 3000 μ. The particle further comprises a second polymer, a therapeutic agent, a contrast agent, and a bioabsorbable coating disposed over the surface region.

L16 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2005:325503 Document No. 142:360904 Aerosol formulations and aerosol delivery of butalbital, lorazepam, ipratropium, baclofen, morphine and scopolamine. Blondino, Frank E.; Poklis, Justin; Baker, Matthew (Chrysalis Technologies Incorporated, USA). U.S. Pat. Appl. Publ. US 2005079137 A1 20050414, 12 pp. (English). CODEN: USXXCO. APPLICATION: US 2004-958329 20041006. PRIORITY: US 2003-508875P 20031007.
AB A liquid aerosol formulation comprising at least one thermally stable active ingredient selected from the group consisting of butalbital, lorazepam, ipratropium, baclofen, morphine, scopolamine, pharmaceutically acceptable salts and esters thereof and derivs. thereof is disclosed. The liquid formulation can include an organic solvent such as propylene glycol and one or more optional excipients. The active ingredient can be present in an amount of 0.01 to 5 weight percent and the formulation can be heated to provide a vapor which forms an aerosol having a mass median aerodynamic diameter of less than 3 μm. A 2% butalbital solution in propylene glycol was prepared The average mass median aerodynamic diameter of aerosol particles were 0.36 μm.

L16 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2004:203528 Document No. 140:258622 Stabilized topical compositions containing polymer thickeners. Haas, Hans E.; Snyder, Marcia; Zirnis, Aija (Permatex Co., Inc., USA). U.S. Pat. Appl. Publ. US 2004048756 A1 20040311, 8 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-238672 20020910.
AB A topical composition has from 0.1 to 2 total weight percent of a first surfactant, an organic solvent, a polymer thickener, and 80 to 98 total weight percent water. The topical composition affords good topical cleaning or lotion actions and rapid water rinse in a form that has a suitable shelf life. The surfactant is chosen to yield a net HLB of between 7 and 13. Petroleum distillates, Surfonic, Igepal CO-430, a slurry of smectic clay (Veegum Ultra granules), Carbomer-934, and 2-methyl-4-isothiozoline-3-one in propylene glycol (Neolone M-50

microbiocide) in water are mixed and homogenized. Sep., triethanolamine is dissolved in water and added to the main portion. The resulting white opaque uniform gel is applied over a thick coating of asphalt on polyethylene board. Addnl., an asphalt solution is applied to hands and allowed to dry. and the composition applied. The time for asphalt removal from the board and skin is then measured. Subsequently, the rinsing characteristics after asphalt removal are noted. The formulation was then subjected to three freeze-thaw cycles with no change in composition stability or performance and the sample is then retained at 50 for 8 wk with no change in composition stability or performance.

L16 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2003:865090 Document No. 140:177327 Manufacture method and application of microorganism immobilized carrier. Yuan, You-Gang (Taiwan). Taiwan. TW 495551 B 20020721, 2 pp. (Chinese). CODEN: TWXXA5. APPLICATION: TW 1998-87116987 19981013.
AB This invention provides the manufacture method and application of microorganism immobilized carrier; ingredients such as microorganism or enzyme, polyetherimide (PEI), polyethylene glycol (PEG) and calcium alginate (Alg) are evenly blended and made into ball carrier in the presence of immobilization agent; the Alg-PEG-PEI (of 0-10 wt . percent individually) multi-ingredient carrier exhibits good water resistance, high porosity and high structural stability after being demonstrated by oxygen uptake rate experiment and mech. strength test, and thus is applicable to the removal of organic nitrogen and inorg. nitrogen in the waste water treatment process and also to the production process of biochem. products.

L16 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
2004:869428 Document No. 142:42588 A method for preparation of a foaming agent for use as lightweight aggregates in aerated concrete. Kim, Beom Su; Kim, Young Ho; Nam, Ki Youl; Song, Myung Shin (Kim, Beom Su, S. Korea). Repub. Korean Kongkae Taeho Kongbo KR 2001007854 A 20010205, No pp. given (Korean). CODEN: KRXXA7. APPLICATION: KR 2000-59382 20001009.
AB A method is described for preparing a foaming agent for aerated lightwt. concrete; the foaming agent reduces crack formation caused through dry shrinkage and increases the compressive strength of concrete with the addition of anti-cracking agents. The method involves blending 50-90 weight% aluminum sulfate solution (containing ≥ 8% of Al2O3), 3-5 weight% cellulose carboxylate, 1-2 weight% polyethylene glycol, and 5-40 weight% clean water based on total 100 weight percent of product, rotating the mix at ≥ 100 rpm and curing for .apprx. 6 h under normal temperature conditions. The aluminum sulfate component reacts with lime (contained in cement product) to generate ettringite as an expandable crystalline mineral.

L16 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
1997:696676 Document No. 127:351221 Oxidized cellulose and vitamin E blend for topical hemostatic applications. Wu, Stephen Hong-wei; Hopkins, Warren Kent (Eastman Chemical Company, USA). PCT Int. Appl. WO 9738737 A1 19971023, 26 pp. DESIGNATED STATES: W: JP; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1997-US6242 19970416. PRIORITY: US 1996-633272 19960416.
AB The present invention relates to hemostatic composition comprising 1 to 90 weight percent of vitamin E or a derivative of vitamin E, 1 to 95 weight percent of oxidized cellulose, and 0.1 to 75 weight percent of water. The hemostatic composition may be formed into pellets, powder, paste, gum, gel, or liquid suitable for molding to conform to the contours of a wound. A hemostatic composition in the form of a powder suitable for topical application to wounds was prepared containing oxidized cellulose powder and molten α-tocopherol

polyethylene glycol succinate.

=> s l11 and glycogen
L17 205 L11 AND GLYCOGEN

=> s l17 and weight percent
L18 0 L17 AND WEIGHT PERCENT

=> s l17 and cytokine
L19 14 L17 AND CYTOKINE

=> dup remove l19
PROCESSING COMPLETED FOR L19
L20 14 DUP REMOVE L19 (0 DUPLICATES REMOVED)

=> s l20 and pd<20040304
1 FILES SEARCHED...
4 FILES SEARCHED...
L21 8 L20 AND PD<20040304

=> d l21 1-8 cbib abs

L21 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
2003:892567 Document No. 139:386334 Production of monomeric calicheamicin derivative cytotoxic drug/carrier conjugates. Kunz, Arthur; Moran, Justin Keith; Rubino, Joseph Thomas; Jain, Neera; Vidunas, Eugene Joseph; Simpson, John McLean; Robbins, Paul David; Merchant, Nishith; Dijoseph, John Francis; Ruppen, Mark Edward; Damle, Nitin Krishnaji; Popplewell, Andrew George; et al. (Wyeth Holdings Corporation, USA). PCT Int. Appl. WO 2003092623 A2 20031113, 186 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-US13910 20030502. PRIORITY: US 2002-377440P 20020502.
AB The present invention relates to methods for. the production of monomeric cytotoxic drug/carrier conjugates (the "conjugates") with higher drug loading and substantially reduced low conjugate fraction (LCF). Cytotoxic drug derivative/antibody conjugates, compns. comprising the conjugates and uses of the conjugates are also described. Particularly, the invention relates to anti-CD22 antibody-monomeric calicheamicin conjugates. The invention also relates to the conjugates of the invention, to methods of purification of the conjugates, to pharmaceutical compns. comprising the conjugates, and to uses of the conjugates.

L21 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
2002:928135 Document No. 138:12467 Devices and methods for transdermal monitoring. Polak, Anthony J.; Ballerstadt, Ralph; Beuhler, Allyson; Gamboa, Claudia (Motorola, Inc., USA). U.S. Pat. Appl. Publ. US 2002182658 A1 20021205, 12 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-832663 20010411.
AB The present invention provides a device and methods for detecting the presence of an analyte in a sample using an encapsulated sensor. Methods for manufacturing the sensor are also disclosed.

L21 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
2002:315216 Document No. 136:306423 Assay for directly detecting a

biological cell in a body fluid sample. Lassen, Michael Rud; Breindahl, Morten (Besst-Test Aps, Den.). PCT Int. Appl. WO 2002033418 A1 20020425, 71 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-DK673 20011012. PRIORITY: DK 2000-1548 20001017; US 2000-242135P 20001023.

AB The invention concerns a method for rapid detection of a biol. cell and/or a biol. particle contained in a fluid sample. The method may be used for rapidly diagnosing a condition in an individual resulting from an infection by a virus, a fungus or a bacteria. The method comprises the further steps of detecting a plurality of infection and/or inflammatory response agents, preferably cytokines, and performing a profile of such agents. The profile is a further indication of the condition being diagnosed. The method for detecting a plurality of infection response agents, preferably cytokines, including the step of performing a profile of such agents, may also be carried out independently of the method for rapidly diagnosing a condition in an individual resulting from an infection by an infectious agent including a virus, fungus and bacteria. In particular the invention relates to a dip stick or like device for rapid detection.

L21 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2002:315215 Document No. 136:306422 Assay for directly detecting a RS virus related biological cell in a body fluid sample. Lassen, Michael Rud; Breindahl, Morten (Besst-Test Aps, Den.). PCT Int. Appl. WO 2002033417 A1 20020425, 64 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-DK672 20011012. PRIORITY: DK 2000-1549 20001017; US 2000-242132P 20001023.

AB The invention concerns a method for rapid detection of a Respiratory Syncytial virus (RS virus) related biol. cell and/or biol. particle contained in a body fluid sample. The method is used for rapidly diagnosing a condition in an individual resulting from an infection by a RS virus. The method comprises the further steps of detecting a plurality of infection and/or inflammatory response agents, preferably cytokines, and performing a profile of such agents. The profile is a further indication of the condition being diagnosed. The method for detecting a plurality of infection response agents, preferably cytokines, includes the step of performing a profile of such agents. In particular the invention relates to a dip stick or like device for rapid detection.

L21 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2002:315206 Document No. 136:339499 Test kit for detecting autoantibodies and cytokines as indicators of infectious and inflammatory conditions. Lassen, Michael Rud; Breindahl, Morten (Besst-Test Aps, Den.). PCT Int. Appl. WO 2002033408 A1 20020425, 59 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,

KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-DK674 20011012. PRIORITY: DK 2000-1550 20001017; US 2000-242176P 20001023.

AB The present invention relates to a method for rapid detection of at least one inflammatory indicator contained in a body fluid sample. The method is used for rapidly diagnosing an infectious and/or inflammatory condition in an individual. The method comprises the further steps of detecting a plurality of infection and/or inflammatory response agents, preferably cytokines, and performing a profile of such agents. The indicators are selected from interleukin 1, IL-1α, IL-1β, IL-1ra, soluble IL-1RI, sIL-1RII, TNFα, TNFRp55, TNFRp75, IL-6, IL-12, sIL-4R, TNFβ, INFγ, IL-4, IL-10, IL-2, IL-8, IL-18, sIL-2R, RANTES, IFNα, eosinophil cationic protein, and autoantibody. In particular the invention relates to a dip stick or like device for rapid detection.

L21 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

1994:158195 Document No. 120:158195 Fullerene-coated surfaces and cell-culture uses thereof. Richmond, Robert C.; Gibson, Ursula J. (Trustees of Dartmouth College, USA). PCT Int. Appl. WO 9400552 A1 19940106, 52 pp. DESIGNATED STATES: W: CA, JP; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1993-US5680 19930614. PRIORITY: US 1992-901911 19920622.

AB Substrates having a surface coated with fullerene and a substance attached thereto are disclosed. Cell culture substrates having a fullerene-coated surface are useful in methods of growing cells on the fullerene-coated surface. Methods of preparing cell culture substrates for cell attachment and growth by coating a surface with fullerene are provided. Cells can be grown on a fullerene-coated surface in the presence of a substance such as a cytokine, growth hormone or a drug, to evaluate the interaction between the substance and the cells. Methods for increasing cell membrane permeability and for introducing a substance, such as a DNA or RNA vector, into a cell are also provided. The methodol. of the invention was applied to CHO cell culture.

L21 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

1993:229355 Document No. 118:229355 Magnetic liquid compositions for imaging contrast agents. Pilgrimm, Herbert (Silica Gel Gesellschaft mbH adsorptions-Technik, Apparatebau, Germany). U.S. US 5160725 A 19921103, 9 pp. Cont.-in-part of U.S. Ser. No. 173,590, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1991-638134 19910104. PRIORITY: DE 1987-3709851 19870324; US 1988-173590 19880325.

AB Magnetic liquid compns. are prepared from physiol. tolerated dispersions of stabilized superparamagnetic particles in water or aqueous salt solution and reactive stabilizer substances chemical bonded over phosphate or phosphonate or carboxylate groups to the surface of the superparamagnetic particles. The reactive stabilizer substances stabilize and chemical bond diagnostic and pharmacol. active substances. The bonded stabilizer substances protect against aggregation. Dextran phosphate was treated with magnetite to form a magnetic liquid which was further carboxymethylated and reacted with anti-human Ig. The resulting magnetic liquid composition can be used for NMR diagnosis or in vitro diagnosis (no data). Preparation of other compns. for NMR or ultrasound imaging is also described.

L21 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

1990:51778 Document No. 112:51778 Stabilized suspension of magnetic particles and its preparation and use in NMR diagnosis. Pilgrimm, Herbert

(Silica Gel GmbH, Fed. Rep. Ger.). Ger. Offen. DE 3709851 A1 19881006, 8 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1987-3709851 19870324.

AB Physiol. compatible dispersions of stabilized superparamagnetic particles, to which tissue-specific binding agents and pharmacol. active agents are bound, are useful as NMR contrast media and for other diagnostic purposes. Magnetite powder is combined with poly(galacturonic acid) and water at 140°. After filtration and dialysis, the suspension is oxidized with $NaIO_4$, and the aldehyde groups produced in the bound poly(galacturonic acid) mols. are coupled with human γ-globulin, followed by reduction with $NaBH_4$. The resulting suspension is suitable for 1H NMR diagnostic use (no data).

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L22         97 L14 AND CYTOKINE

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L23         45 L22 AND PD<20040304

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L24          8 L23 AND WEIGHT

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L25 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2008:5995 Document No. 148:85792 Biodegradable injectable implants containing glycolic acid. Caseres, Crisoforo Peralta; De Lagarde, Daniel Leon (Medgraft Microtech, Inc., Spain). U.S. US 7314636 B2 20080101, 22pp., Cont.-in-part of U.S. Ser. No. 2,283, abandoned. (English). CODEN: USXXAM. APPLICATION: US 2002-186183 20020628. PRIORITY: MX 2001-2001/PA6732 20010629; US 2001-2283 20011205.

AB This invention is directed to the field of medical implants, and more specifically to biodegradable injectable implants and their methods of manufacture and use. The injectable implants disclosed herein comprise glycolic acid and biocompatible/bioabsorbable polymeric particles containing a polymer of lactic acid. The particles are small enough to be injected through a needle but large enough to avoid engulfment by macrophages. The injectables of this invention may be in a pre-activated solid form or an activated form (e.g., injectable suspension or emulsion).

L25 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2004:41260 Document No. 140:99695 Polymer affinity matrixes for extracorporeal removal of toxins. Rapp, Wolfgang; Deppisch, Reinhold; Goehl, Hermann; Wittner, Bernd; Beck, Werner (Gambro Lundia AB, Swed.). PCT Int. Appl. WO 2004004707 A1 20040115, 99 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-SE1166 20030704. PRIORITY: SE 2002-2114 20020708.

AB The invention concerns a polymer affinity matrix for the binding of 1 or more substances in a fluid or removing the substance(s) from the fluid

and/or decreasing the amount in the fluid with a view to preventing, eliminating or reducing undesired activation of components in the fluid is described, as well as a method for removing the substance(s) from the fluid and/or decreasing the amts. in the fluid, and a method for the production of the matrix. The polymer affinity matrix comprises a solid support, a spacer and a ligand containing arginine as a binding unit. A time period of 2 h was needed to efficiently remove the endotoxins from blood plasma. The matrix used was polystyrene bound to PEG and Arg8.

L25 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
2002:849482 Document No. 137:358132 Pharmaceutical hydrogel compositions containing polymers. Cleary, Gary W.; Parandoosh, Shoreh; Feldstein, Mikhail M.; Chalykh, Anatoly E. (A.V. Topchiev Institute of Petrochemical Synthesis, Russia). PCT Int. Appl. WO 2002087645 A1 20021107, 61 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US14260 20020501. PRIORITY: US 2001-288008P 20010501.
AB Hydrogel compns. are provided (a) that have a continuous hydrophobic phase and a discontinuous hydrophilic phase, (b) that have a discontinuous hydrophilic phase and a continuous hydrophilic phase, or (c) that are entirely composed of a continuous hydrophilic phase. The hydrophobic phase, if present, is composed of a hydrophobic polymer, particularly a hydrophobic pressure-sensitive adhesive (PSA), a plasticizing elastomer, a tackifying resin, and an optional antioxidant. The discontinuous hydrophilic phase, if present, is composed of a crosslinked hydrophilic polymer, e.g., a crosslinked cellulosic polymer such as crosslinked sodium CM-cellulose. For those hydrogel compns. containing a continuous hydrophilic phase, the components of the phase include a cellulose ester composition or an acrylate polymer or copolymer, and a blend of hydrophilic polymer and a complementary oligomer capable of hydrogen bonding thereto. Films prepared from hydrogel compns. containing or entirely composed of the aforementioned continuous hydrophilic phase can be made translucent, and may be prepared using either melt extrusion or solution casting. A preferred use of the hydrogel compns. is in wound dressings, although numerous other uses are possible as well. Thus, a hydrogel composition contained cellulose acetate butyrate 21.96, PVP 43.93, and PEG-400 33.71% by weight

L25 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
2002:391576 Document No. 136:406913 Method for restoring a damaged or degenerated intervertebral disk. Desrosiers, Eric Andre; Chenite, Abdellatif; Berrada, Mohammed; Chaput, Cyril (Bio Syntech Canada Inc., Can.). PCT Int. Appl. WO 2002040070 A2 20020523, 46 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-CA1623 20011115. PRIORITY: US 2000-248226P 20001115; US 2000-248568P 20001116.
AB The present invention relates to a minimally-invasive method for restoring a damaged or degenerated intervertebral disk at an early stage. The

method comprises the step of administering an injectable in situ setting formulation in the nucleus pulposus of the damaged or degenerated disk of a patient. The formulation once injected combines with nucleus matters and host cells, and becomes viscous or gels in situ within the annulus fibrosus of the disk for increasing the thickness and volume of the damaged or degenerated disk. The formulation is retained within the disk for providing restoration of the damaged or degenerated disk. An acidic solution made of a water/acetic acid was prepared for all expts. The pH of this acidic solution was adjusted to 4.0. High mol. weight chitosan powder was added and dissolved in a volume of the acidic solution so as to produce chitosan solns. having chitosan proportions ranging from 0.5 to 2.0%. Glycerophosphate was added to the chitosan solns. and induced a pH increase. Chitosan and β-glycerophosphate components individually influenced the pH increase within the aqueous solns., and consequently influenced the sol to gel transition.

L25 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2002:157622 Document No. 136:205500 Preparation of polymer surfaces for biocompatible materials. Ulbricht, Mathias; Thom, Volkmar; Jankova, Katja; Altankov, George; Jonsson, Gunnar (Surfarc Aps, Den.). PCT Int. Appl. WO 2002015955 A2 20020228, 217 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-DK557 20010823. PRIORITY: DK 2000-1250 20000823.

AB The present invention concerns a novel approach of creating biocompatible surfaces, the surfaces being capable of functionally interacting with biol. materials. The biocompatible surfaces comprise at least 2 components, such as a hydrophobic substratum and a macromol. of hydrophilic nature, which form together the novel biocompatible surfaces. The novel approach is based on contacting the hydrophobic substratum with a laterally patterned monomol. layer of the hydrophilic and flexible macromols., exhibiting a pronounced excluded volume The 2-component surface thus formed, is, with respect to polarity and morphol., a molecularly heterogeneous surface. Structural features of the macromol. monolayer (e.g,. the layer thickness or its lateral d.) are determined by the structural features of the layer forming macromols. (their MW or their mol. architecture) and the method of creating the monomol. layer (e.g., by phys. or chemical sorption, or by chemical binding the macromols.). The structural features of the layer forming macromols.(s) is in turn determined by synthesis. The amount and conformation and also the biol. activity of biol. materials (e.g., polypeptides) which contact the novel biocompatible surface, is determined and maintained by the cooperative action of the underlying hydrophobic substratum and the macromol. layer. It becomes possible to maintain and control biol. interactions between said contacted polypeptides and other biol. compds. e.g., cells, antibodies and the like. Consequently, the present invention aims to reduce and/or eliminate the deactivation and/or denaturation associated with the contacting of polypeptides and/or other biol. material to a hydrophobic substratum surface. Thus, α-4-azidobenzoyl-ω-methoxy PEG was prepared and grafted to polysulfone surfaces and their wettability was determined The adsorption properties of the grafted polymer were evaluated by exposing it to BSA solution

L25 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2001:816464 Document No. 135:362573 Hemostatic compositions of polyacids and polyalkylene oxides. Cortese, Stephanie M.; Schwartz, Herbert E.; Oppelt,

William G. (Fziomed, Inc., USA). PCT Int. Appl. WO 2001082937 A1 20011108, 58 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US13520 20010426. PRIORITY: US 2000-PV200457 20000428; US 2000-PV200637 20000428.

AB The present invention relates to improved methods for making and using hemostatic, bioadhesive, bioresorbable, anti-adhesion compns. made of intermacromol. complexes of carboxyl-containing polysaccharides, polyether, polyacids, polyalkylene oxides, and optionally including multivalent cations and/or polycations and/or hemostatic agents. The polymers can be associated with each other, and are then either dried into membranes or sponges, or are used as fluids, gels, or foams. Hemostatic, bioresorbable, bioadhesive, anti-adhesion compns. are useful in surgery to prevent bleeding and the formation and reformation of post-surgical adhesions. The compns. are designed to breakdown in-vivo, and thus be removed from the body. The hemostatic, anti-adhesion, bioadhesive, bioresorptive, antithrombogenic and/or phys. properties of such compns. can be varied as needed by carefully adjusting the pH, solids content cation content of the polymer casting solns., polyacid composition, the polyalkylene oxide composition, or by adding hemostatic agents. Hemostatic membranes, gels and/or foams can be used concurrently. Hemostatic, antiadhesion compns. may also be used to lubricate tissues and/or medical instruments, and/or deliver drugs to the surgical site and release them locally. CMC/PEO membranes, especially the 50/50 CMC/PEO membrane, is highly anti-thrombogenic, based on the reduction in the number of adherent platelets and
the extent of platelet activation on these surfaces. Thus, increasing the amount of PEO in membranes increases their antithrombogenic properties.

L25 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

2001:816395 Document No. 135:362559 Polyacid/polyalkylene oxide foams and gels for drug delivery. Miller, Mark E.; Cortese, Stephanie M.; Schwartz, Herbert E.; Oppelt, William G. (Fziomed, Inc., USA). PCT Int. Appl. WO 2001082863 A2 20011108, 57 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US13505 20010426. PRIORITY: US 2000-PV200637 20000428; US 2000-PV200457 20000428.

AB The present invention relates to improved methods for delivering bioadhesive, bioresorbable, anti-adhesion compns. Antiadhesion compns. can be made of intermacromol. complexes of carboxyl-containing polysaccharides, polyethers, polyacids, polyalkylene oxides, multivalent cations and/or polycations. The polymers are associated with each other, and are then used as fluids, gels or foams. By providing a product bag, the compns. can be delivered as gels or as sprays. By dissolving propellant gases in the compns., the materials can be delivered as foams, which have decreased d., and therefore can adhere to surfaces that previously have been difficult to coat with antiadhesion gels. Delivery systems can also provide mechanisms for expelling more product, and for directing the flow of materials leaving the delivery system. Bioresorbable, bioadhesive, anti-adhesion, and/or hemostatic compns. are useful in surgery to prevent

the formation and reformation of post-surgical adhesions. The biol. and phys. properties of such compns. can be varied as needed by carefully adjusting the pH and/or cation content of the polymer casting solns., polyacid composition, the polyalkylene oxide composition, or by selecting the solids content of the composition Antiadhesion compns. may also be used to lubricate tissues and/or medical instruments, and/or deliver drugs to the surgical site and release them locally. An antiadhesion composition comprising a gel was loaded into a CCL ABS canister with a liner. The composition comprised 2.2% total solids with a ratio of CMC to PEG of 97.5:2.5, and included sufficient Ca to provide a 60% ionically associated complex. Portions of the composition were sterilized in an autoclave at a temperature of 122° for 35 min.

L25 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
2001:452864 Document No. 135:51098 Pharmaceutical implants containing immediate-release and sustained-release components. Moseley, William M.; Foster, Todd P.; Singh, Satish Kumar (Pharmacia & Upjohn Co., USA). PCT Int. Appl. WO 2001043749 A2 20010621, 25 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US30177 20001204. PRIORITY: US 1999-PV171215 19991216.

AB A pharmaceutical implant for administering a drug is made up of an immediate-release component, preferably containing a disintegrant, and a sustained-release component. The implant provides flexibility in adjusting the release of the drug and a faster onset of release can be provided along with a long-term sustained-release. The release rate of the drug can be adjusted by controlling the relative quantities of the immediate-release component and the sustained-release component. Thus, immediate-release pellets contained melengestrol acetate 24, lactose monohydrate 5.0, Croscarmellose sodium 1.5, pregelatinized starch 6.0, colloidal SiO2 0.2, and Mg stearate 1.0 mg. Sustained-release pellets comprised melengestrol acetate 24, lactose monohydrate 8.235, sorbitol 0.335, sucrose 0.2755, pregelatinized starch 2.0, colloidal SiO2 0.2, and Mg stearate 1.0 mg.

=> s l14 and viral antigen
L26 4 L14 AND VIRAL ANTIGEN

=> dup remove l26
PROCESSING COMPLETED FOR L26
L27 3 DUP REMOVE L26 (1 DUPLICATE REMOVED)

=> d l27 1-3 cbib abs

L27 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
2004:902155 Document No. 141:384286 Novel encochleation methods, cochleates and methods of use. Mannino, Raphael J.; Gould-Fogerite, Susan; Krause-Elsmore, Sara L.; Delmarre, David; Lu, Ruying (Biodelivery Sciences International, Inc., USA; University of Medicine and Dentistry of New Jersey). PCT Int. Appl. WO 2004091578 A2 20041028, 195 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,

PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2004-US11026 20040409. PRIORITY: US 2003-461483P 20030409; US 2003-463076P 20030415; US 2003-499247P 20030828; US 2003-502557P 20030911; US 2003-532755P 20031224; US 2004-537252P 20040115.

AB The invention generally relates to cochleate drug delivery vehicles. Disclose are novel methods for making cochleates and cochleate compns. that include introducing a cargo moiety to a liposome in the presence of a solvent. Also disclosed are cochleates and cochleate compns. that include an aggregation inhibitor, and optionally, a cargo moiety. Addnl., anhydrous cochleates that include a protonized cargo moiety, a divalent metal cation and a neg. charge lipid are disclosed. Methods of using the cochleate compns. of the invention, including methods of administration, are also disclosed.

L27 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1987:193828 Document No.: PREV198783101952; BA83:101952. SECOND-STEP CONCENTRATION OF HEPATITIS A VIRUS FROM CONTAMINATED WATER COMPARISON BETWEEN PRECIPITATION BY POLYETHYLENE GLYCOL AND ORGAN FLOCCULATION. BIZIAGOS E A [Reprint author]; PASSAGOT J; CRANCE J-M; DELOINCE R. SECT BIOL CELL, DIV MICROBIOL, CRSSA, 108 BLVD PINEL, 69275 LYON CEDEX 03, FR. Deltion Ellenikes Mikrobiologikes Etaireias, (1986) Vol. 31, No. 1-2, pp. 29-40.
CODEN: DHMHDW. ISSN: 0438-9573. Language: FRENCH.

AB Two methods (precipitation by polyethylene glycol (PEG 6000) and organic flocculation) for the second-step concentration of hepatitis A virus (HAV) from experimentally contaminated water were compared. The use of these 2 methods for recovery of HAV present in beef extract or in the eluate following adsorption-elution on cellulose membranes, showed the superior efficacy of precipitation by PEG 6000, whether for the viral antigen or for the infectious virus. Precipitation by PEG 6000 showed a 79-97% efficacy while organic flocculation had a 20-52% efficacy. Precipitation by PEG 6000 is therefore proposed as the second-step concentration method in the framework of detection of HAV from contaminated waters.

L27 ANSWER 3 OF 3 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 1

1978052042 EMBASE Comparative studies on different methods for concentration of Japanese encephalitis viral antigens prepared from Vero cell culture. Venkateshan C.N.; Gupta N.P.; Sheikh B.H.; et. al.. Virus Res. Cent., Poona, India. Indian Journal of Medical Research Vol. 64, No. 11, pp. 1557-1565 1976.
ISSN: 0019-5340. CODEN: IJMRAQ
Language: English.

AB Japanese encephalitis (JE) virus grown in Vero culture was concentrated by precipitation with polyethylene glycol (PEG), lyophilization, negative pressure ultrafiltration, and dialysis against sucrose and carboxymethyl cellulose (CMC). Recovery of haemagglutinating antigen (HA) was better with PEG precipitation and sucrose dialysis. However, recovery of complement fixing (CF) antigen was greater with the latter. Antigen concentrated by sucrose dialysis could not be inactivated by beta propiolactone (BPL). Protamine sulphate did not improve the HA titre. PEG precipitated antigens which could be conveniently inactivated by BPL and HA titre was enhanced after treatment with protamine sulphate. Reactivity of concentrated HA antigens (PEG precipitated and sucrose dialysed) in haemagglutination inhibition test was comparable with that of sucrose acetone (SA) extracted mouse brain antigen. The other methods were not very satisfactory to concentrate the antigen from large volumes.

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=> d his

     (FILE 'HOME' ENTERED AT 13:38:34 ON 22 MAR 2008)

     FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS' ENTERED AT 13:38:50 ON
     22 MAR 2008
L1          1129 S SOLUBLE MATRIX
L2           105 S L1 AND STIMULAT?
L3             7 S L2 AND LEUKOCYTE
L4             3 DUP REMOVE L3 (4 DUPLICATES REMOVED)
L5             0 S L1 AND IMMUNE TOLERAANCE
L6             1 S L1 AND IMMUNE TOLERANCE
L7            24 S L1 AND POLYETHYLENE GLYCOL
L8             0 S L7 AND CYTOKINE
L9             2 S L7 AND STARCH
L10            2 DUP REMOVE L9 (0 DUPLICATES REMOVED)
L11       185819 S POLYETHYLENE GLYCOL
L12         4805 S L11 AND STARCH
L13            1 S L12 AND WEIGHT PERCENT
L14        12300 S L11 AND CELLULOSE
L15            9 S L14 AND WEIGHT PERCENT
L16            9 DUP REMOVE L15 (0 DUPLICATES REMOVED)
L17          205 S L11 AND GLYCOGEN
L18            0 S L17 AND WEIGHT PERCENT
L19           14 S L17 AND CYTOKINE
L20           14 DUP REMOVE L19 (0 DUPLICATES REMOVED)
L21            8 S L20 AND PD<20040304
L22           97 S L14 AND CYTOKINE
L23           45 S L22 AND PD<20040304
L24            8 S L23 AND WEIGHT
L25            8 DUP REMOVE L24 (0 DUPLICATES REMOVED)
L26            4 S L14 AND VIRAL ANTIGEN
L27            3 DUP REMOVE L26 (1 DUPLICATE REMOVED)

=> s l11 and cellulose
L28       12300 L11 AND CELLULOSE

=> s l28 and viral antigen
L29            4 L28 AND VIRAL ANTIGEN

=> s l29 and cytomegalo virus
L30            0 L29 AND CYTOMEGALO VIRUS

=> dup remove l29
PROCESSING COMPLETED FOR L29
L31            3 DUP REMOVE L29 (1 DUPLICATE REMOVED)

=> d l31 1-3 cbib abs

L31  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
2004:902155   Document No. 141:384286  Novel encochleation methods, cochleates
     and methods of use.  Mannino, Raphael J.; Gould-Fogerite, Susan;
     Krause-Elsmore, Sara L.; Delmarre, David; Lu, Ruying (Biodelivery Sciences
     International, Inc., USA; University of Medicine and Dentistry of New
     Jersey).  PCT Int. Appl. WO 2004091578 A2 20041028, 195 pp.  DESIGNATED
     STATES: W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,
     CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
     GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
     LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
     PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
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UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2004-US11026 20040409. PRIORITY: US 2003-461483P 20030409; US 2003-463076P 20030415; US 2003-499247P 20030828; US 2003-502557P 20030911; US 2003-532755P 20031224; US 2004-537252P 20040115.

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L31 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

1987:193828 Document No.: PREV198783101952; BA83:101952. SECOND-STEP CONCENTRATION OF HEPATITIS A VIRUS FROM CONTAMINATED WATER COMPARISON BETWEEN PRECIPITATION BY POLYETHYLENE GLYCOL AND ORGAN FLOCCULATION. BIZIAGOS E A [Reprint author]; PASSAGOT J; CRANCE J-M; DELOINCE R. SECT BIOL CELL, DIV MICROBIOL, CRSSA, 108 BLVD PINEL, 69275 LYON CEDEX 03, FR. Deltion Ellenikes Mikrobiologikes Etaireias, (1986) Vol. 31, No. 1-2, pp. 29-40.
CODEN: DHMHDW. ISSN: 0438-9573. Language: FRENCH.

AB Two methods (precipitation by polyethylene glycol (PEG 6000) and organic flocculation) for the second-step concentration of hepatitis A virus (HAV) from experimentally contaminated water were compared. The use of these 2 methods for recovery of HAV present in beef extract or in the eluate following adsorption-elution on cellulose membranes, showed the superior efficacy of precipitation by PEG 6000, whether for the viral antigen or for the infectious virus. Precipitation by PEG 6000 showed a 79-97% efficacy while organic flocculation had a 20-52% efficacy. Precipitation by PEG 6000 is therefore proposed as the second-step concentration method in the framework of detection of HAV from contaminated waters.

L31 ANSWER 3 OF 3 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 1

1978052042 EMBASE Comparative studies on different methods for concentration of Japanese encephalitis viral antigens prepared from Vero cell culture. Venkateshan C.N.; Gupta N.P.; Sheikh B.H.; et. al.. Virus Res. Cent., Poona, India. Indian Journal of Medical Research Vol. 64, No. 11, pp. 1557-1565 1976.
ISSN: 0019-5340. CODEN: IJMRAQ
Language: English.

AB Japanese encephalitis (JE) virus grown in Vero culture was concentrated by precipitation with polyethylene glycol (PEG), lyophilization, negative pressure ultrafiltration, and dialysis against sucrose and carboxymethyl cellulose (CMC). Recovery of haemagglutinating antigen (HA) was better with PEG precipitation and sucrose dialysis. However, recovery of complement fixing (CF) antigen was greater with the latter. Antigen concentrated by sucrose dialysis could not be inactivated by beta propiolactone (BPL). Protamine sulphate did not improve the HA titre. PEG precipitated antigens which could be conveniently inactivated by BPL and HA titre was enhanced after treatment with protamine sulphate. Reactivity of concentrated HA antigens (PEG precipitated and sucrose dialysed) in haemagglutination inhibition test was comparable with that of sucrose acetone (SA) extracted mouse brain antigen. The other methods were not very satisfactory to concentrate the antigen from large volumes.

```
=> s l11 and starch
L32       4805 L11 AND STARCH

=> s l32 and viral antigen
L33          2 L32 AND VIRAL ANTIGEN

=> dup remove l33
PROCESSING COMPLETED FOR L33
L34           2 DUP REMOVE L33 (0 DUPLICATES REMOVED)

=> d l34 1-2 cbib abs

L34  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
2004:902155   Document No. 141:384286  Novel encochleation methods, cochleates
     and methods of use.  Mannino, Raphael J.; Gould-Fogerite, Susan;
     Krause-Elsmore, Sara L.; Delmarre, David; Lu, Ruying (Biodelivery Sciences
     International, Inc., USA; University of Medicine and Dentistry of New
     Jersey).  PCT Int. Appl. WO 2004091578 A2 20041028, 195 pp.  DESIGNATED
     STATES: W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,
     CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
     GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
     LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
     PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
     UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI,
     CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL,
     PT, SE, SN, TD, TG, TR.  (English).  CODEN: PIXXD2.  APPLICATION: WO
     2004-US11026 20040409.  PRIORITY: US 2003-461483P 20030409; US
     2003-463076P 20030415; US 2003-499247P 20030828; US 2003-502557P 20030911;
     US 2003-532755P 20031224; US 2004-537252P 20040115.
AB   The invention generally relates to cochleate drug delivery vehicles.
     Disclose are novel methods for making cochleates and cochleate compns.
     that include introducing a cargo moiety to a liposome in the presence of a
     solvent.  Also disclosed are cochleates and cochleate compns. that include
     an aggregation inhibitor, and optionally, a cargo moiety.  Addnl., anhydrous
     cochleates that include a protonized cargo moiety, a divalent metal cation
     and a neg. charge lipid are disclosed.  Methods of using the cochleate
     compns. of the invention, including methods of administration, are also
     disclosed.

L34  ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
2005:128061   Document No. 142:457022  Indirect ELISA method for detecting the
     antibody of bovine vial diarrhea virus.  Zhang, Qinxian; Wang, Zeyu; Chen,
     Ruifeng (Peop. Rep. China).  Faming Zhuanli Shenqing Gongkai Shuomingshu
     CN 1460857 A  20031210, 11 pp.  (Chinese).  CODEN: CNXXEV.  APPLICATION:
     CN 2003-126199 20030610.
AB   The method comprises diluting viral antigen or its
     recombinant with carbonate buffer (pH 9.6) to 0.1-10.0 μg mL- 1,
     coating the polystyrene microporous board, blocking with 0.1-20.0%
     peptone-containing phosphate buffer (pH 6.5-8.0), treating with 20%
     sucrose-containing phosphate buffer (pH 6.5-8.0) at normal temperature for 3 h,
     drying to obtain antigen-pre-coated strip; allowing to react horse-radish
     peroxidase (HRP) with NaIO4 solution at 2-8°C for 1 h in dark ambient
     then with ethylene glycol at 2-8°C for 28-32 min to activate HRP,
     dialyzing against acetate buffer at 2-8°C overnight, labeling the
     rabbit-anti- bovine IgG with the activated HRP in carbonate buffer (pH
     9.5) at 2-8° and pH 9.2 for 20 h, reducing with NaBH4 solution at 2-
     8° for 2 h, dialyzing against phosphate buffer (pH 6.0) at
     2-8°C overnight to obtain HRP-labeled strip; co-culturing with
     serum sample at 37° for 20-60 min, culturing with the substrate
     buffer at 37° for 20-60 min, color developing with color-developing
     A and color-developing B at 37° for 10 min, terminating, and
```

detecting. The substrate buffer is composed of polyethylene glycol sensitizing agent 0.1-5.0, peptone 0.1-20.0, enzyme protecting agent 0.05, mercurothiolate 0.05, Tween-20 0.1, and phosphate buffer (pH 6.5-8.0) to 100%. The color-developing A is 0.05% urea peroxide containing acetate buffer (pH 5.0). The color-developing B is composed of 3,3',5,5'- tetramethylbenzidine 0.16, glycerol 0.32, and methanol to 100%. The sensitizing agent may be dextran, heparin, hyaluronic acid, soluble starch, glycogen, etc.

```
=> s carrier
L35     942366 CARRIER

=> s l35 and polyurethanes
L36       1735 L35 AND POLYURETHANES

=> s l36 and polycarbonate
L37        214 L36 AND POLYCARBONATE

=> s l37 and polystyrene
L38         87 L37 AND POLYSTYRENE

=> s l38 and glass
L39         15 L38 AND GLASS

=> s l39 and virus
L40          1 L39 AND VIRUS

=> d l40 cbib abs

L40  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
2007:175552   Document No. 146:224367  Separation and concentration of
     biological cells and biological particles using a one-dimensional channel.
     Chiu, Daniel T.; Kuo, Jason S. (USA).  U.S. Pat. Appl. Publ. US 2007037172
     A1 20070215, 29pp.  (English).  CODEN: USXXCO.  APPLICATION: US
     2005-202416 20050811.
AB   This document discloses, among other things, a method and system for a
     substrate having a bypass region for fluid flow.  The substrate includes a
     plurality of fluid flow channels with each channel configured to
     concurrently allow fluid flow while precluding passage of a target
     particle or object.


=> s l38 and cytomegalovirus
L41          0 L38 AND CYTOMEGALOVIRUS

=> s gut skin
L42        215 GUT SKIN

=> s l42 and viral antigen
L43          0 L42 AND VIRAL ANTIGEN

=> s l42 and PEG
L44          0 L42 AND PEG

=> s l42 and carrier
L45          3 L42 AND CARRIER

=> dup remove l45
PROCESSING COMPLETED FOR L45
L46           2 DUP REMOVE L45 (1 DUPLICATE REMOVED)
```

=> d l46 1-2 cbib abs

L46 ANSWER 1 OF 2 MEDLINE on STN
89256587. PubMed ID: 2723400. Distribution of the calcium-binding protein SPARC in tissues of embryonic and adult mice. Sage H; Vernon R B; Decker J; Funk S; Iruela-Arispe M L. (Department of Biological Structure, University of Washington, Seattle 98195.) The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society, (1989 Jun) Vol. 37, No. 6, pp. 819-29. Journal code: 9815334. ISSN: 0022-1554. Pub. country: United States. Language: English.

AB SPARC (Secreted Protein that is Acidic and Rich in Cysteine), a Ca++-binding glycoprotein also known as osteonectin, is produced in significant amounts by injured or proliferating cells in vitro. To elucidate the possible function of SPARC in growth and remodeling, we examined its distribution in embryonic and adult murine tissues. Immunohistochemistry on adult mouse tissues revealed a preferential association of SPARC protein with epithelia exhibiting high rates of turnover (gut, skin, and glandular tissue). Fetal tissues containing high levels of SPARC included heart, thymus, lung, and gut. In the 14-18-day developing fetus, SPARC expression was particularly enhanced in areas undergoing chondrogenesis, osteogenesis, and somitogenesis, whereas 10-day embryos exhibited selective staining for this protein in Reichert's membrane, maternal sinuses, and trophoblastic giant cells. SPARC displayed a Ca++-dependent affinity for hydrophobic surfaces and was not incorporated into the extracellular matrix produced by cells in vitro. We propose that in some tissues SPARC associates with cell surfaces to facilitate proliferation during embryonic morphogenesis and normal cell turnover in the adult.

L46 ANSWER 2 OF 2 EMBASE DUPLICATE 1
1981247195 EMBASE Immunohistologic localization of 'facteur thymique serique' (FTS) in human thymic epithelium. Jambon B.; Montagne P.; Bene M.-C.; et. al.. Lab. Immunol., Fac. A Med., 54500 Vandoeuvre-Les-Nancy, France. Journal of Immunology Vol. 127, No. 5, pp. 2055-2059 1981. ISSN: 0022-1767. CODEN: JOIMA3
Pub. Country: United States. Language: English.
Entered STN: 911209. Last Updated on STN: 911209

AB Facteur thymique serique (FTS) has been studied extensively because of its role as a T cell inducer, but its presence in human thymic structures, although likely, has not yet been demonstrated. Indirect immunofluorescence (IF) was performed to characterize this molecule in human thymic epithelium by using highly specific anti-FTS antibodies. This antiserum was prepared by the immunization of rabbits with chemically pure, synthetic FTS that was covalently coupled to a nonimmunogenic, insoluble microparticular carrier. To eliminate a low non-specific staining of the background, the serum was absorbed on a series of human tissue powders. Anti-FTS activity was demonstrated by passive hemagglutination of FTS-coated, tanned sheep red blood cells and disappeared after treatment with immunosorbent made of FTS that was covalently linked to acrylamide agarose beads. Six thymuses were studied; 3 from normal young adults, 2 from myasthenic patients, and 1 from a 16-wk-old fetus. In every case, FTS could be visualized in 2 thymic structures: Hassall's corpuscles and reticuloepithelial cells. The specificity of the labeling was assessed by: 1) the disappearance of IF staining when the serum was absorbed on an FTS immunosorbent or incubated with free FTS; and 2) the IF negativity of frozen cut sections of human gut, skin, thyroid, muscle, spleen, lymph nodes, tonsils, parathyroid, and brain. The presence of FTS in the epithelial reticular framework of the human thymus, in the direct vicinity of differentiating lymphocytes, suggests that this molecule could be an active component of the immunoregulatory microenvironment of this lymphoid

organ as early as 16 wk of intrauterine life. The absence of FTS in a panel of other human organs that were studied brings strong evidence for a thymic origin of FTS.

```
=> s artificial lymph node
L47         18 ARTIFICIAL LYMPH NODE

=> dup remove l47
PROCESSING COMPLETED FOR L47
L48          11 DUP REMOVE L47 (7 DUPLICATES REMOVED)

=> s l48 and pd<20050304
   1 FILES SEARCHED...
   4 FILES SEARCHED...
L49          5 L48 AND PD<20050304

=> d l49 1-5 cbib abs

L49  ANSWER 1 OF 5     MEDLINE on STN
2000173973.    PubMed ID: 10709197.   [The artificial lymph
     node].   K probleme iskusstvennogo limfaticheskogo uzla. Borodin
     Iu I; Liubarskii M S; Maiborodin I V; Pekarev O G; Smagin A A. (Institute
     of Clinical and Experimental Lymphology, Siberian Section, Russian Academy
     of Medical Sciences, Novosibirsk. ) Morfologiia (Saint Petersburg,
     Russia), (1999) Vol. 116, No. 6, pp. 38-43.  Journal code:
     9317610. ISSN: 1026-3543. Pub. country: RUSSIA: Russian Federation.
     Language: Russian.
AB   Adsorption of lymphocytes on the sorbents in correction of inflammatory
     lesions has significant clinical perspectives as the cells and active
     biological substances they secrete function actively in inflamed tissues
     acting in the site of its application: every cell adsorbs and inactivates
     foreign substances, every cytokin affects certain target cells.  The
     products of these cells functioning and dissociation as well as the
     products of immune system reaction to them remain on the sorbent and are
     eliminated together with granules during bandaging or by the end of the
     treatment thus do not entering the organism.  Lymphocytic monolayer on the
     sorbent does not prevent its specific action in pathologic nidus.  In this
     case sorbent does not only drain the tissue duplicating certain primitive
     non specific functions of regional lymph node (barrier, filtrating,
     transport, draining and protective functions) but also performs certain
     highly specialized functions of immunocompetent organs--selective
     adsorption and inactivation of antigenic substances.  It is reasonable to
     use sorbents for adsorbing lymphocytes in kapron containers which exclude
     the preparation leak into wounds and cavities and act as a filter
     preventing fast inactivation of the preparation by large fragments of
     tissue detritus.

L49  ANSWER 2 OF 5     MEDLINE on STN
66162221.    PubMed ID: 4161360.   [Artificial lymph
     node thesaurismosis following polyvinylpyrrolidone].
     Thesaurismose ganglionnaire artificielle apres Polyvinyl-pyrrolidone.
     Widgren S. Frankfurter Zeitschrift fur Pathologie, (1965) Vol.
     74, No. 7, pp. 754-9.  Journal code: 0151576. ISSN: 0367-3480. Pub.
     country: GERMANY, WEST: Germany, Federal Republic of. Language: French.

L49  ANSWER 3 OF 5  EMBASE  COPYRIGHT (c) 2008 Elsevier B.V. All rights
     reserved on STN
2002424443  EMBASE  Affinity hemodialysis for antiviral therapy with specific
     application to HIV. Tullis R.H.; Scamurra D.O.; Ambrus Jr. J.L.. R.H.
     Tullis, Aethlon Medical Inc., 3344 Industrial Court, San Diego, CA 92121,
     United States. rhtullis@aethlonmedical.com. Journal of Theoretical
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Medicine Vol. 4, No. 3, pp. 157-166 Sep 2002.
Refs: 86.
ISSN: 1027-3662. CODEN: JTMEF5
Pub. Country: United Kingdom. Language: English. Summary Language: English.
Entered STN: 20021205. Last Updated on STN: 20021205
AB We propose an artificial lymph node to improve immune function in fighting viral diseases. The device is based on hemodialysis using a cartridge containing a solid phase affinity resin. Virus capture is mediated by a collection of broad specificity antibodies covalently coupled to agarose. Viral proteins, which can directly damage uninfected cells, are also efficiently removed. Immobilized antisense DNA provides a mechanism to remove infectious viral nucleic acids. Theoretical calculations suggest that the device could effectively remove virus, toxic viral proteins and infectious viral nucleic acids from the blood thereby limiting disease by preventing reinfection of new cells. In the absence of newly infected cells, previously infected cells are cleared by the immune system. For a typical immobilized antibody, calculations predict a pseudo-first order rate of capture (t(1/2) .apprx. 10 min) with viral load reduction .apprx. 660-fold at equilibrium. Theoretical calculations of a diffusion limited process predict t(1/2) .apprx. 2.8h. Measured transport rates for latex particles in a prototype device are significantly faster than the theoretical diffusion limit suggesting that transport is primarily convective and sufficient to allow rapid virus clearance. Since the device is highly selective it can be used in conjunction with drug therapy and other treatments.

L49 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
2006:189576 Document No. 145:186187 Generation of artificial lymph nodes. Watanabe, Takeshi (Research Unit for Immune Surveillance, Research Center for Allergy and Immunology, RIKEN, Yokohama, 230-0045, Japan). Rinsho Men'eki, 44(6), 676-681 (Japanese) 2005. CODEN: RNMKAU. ISSN: 0386-9695. Publisher: Kagaku Hyoronsha.
AB A review discusses a new method for generating artificial lymph node to develop possible application in immunotherapy.

L49 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
2004:756196 Document No. 141:266050 Artificial lymph node and its use as immunomodulator, for treatment of immune disorders, and for therapeutic kits. Suematsu, Sachiko; Watanabe, Takeshi (Sangaku Renkei Kiko Kyushu Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004255110 A 20040916, 25 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2003-52088 20030227.
AB Artificial lymph node contain cytokine, stroma cells, and high-mol. weight biol. material. Thus, lymphotoxin α-producing murine thymus gland stroma cell line TEL-2 was adsorbed by collagen sponge and transplanted to the kidney of mice. The artificial lymph node, which contained dendritic cells, attracted many T cells and B cells.

=> s scholz m?/au
L50 3031 SCHOLZ M?/AU

=> s l50 and leukocyte stimulation
L51 1 L50 AND LEUKOCYTE STIMULATION

=> d l51 cbib abs

L51 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

2005:975659 Document No. 143:254039 Formulation of leukocyte-stimulation matrixes for vaccination and the determination of T-cell subtypes. Scholz, Martin (Leukocare GmbH, Germany). Eur. Pat. Appl. EP 1571204 A1 20050907, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK. (German). CODEN: EPXXDW. APPLICATION: EP 2004-5177 20040304.

AB The invention concerns leukocyte-stimulation matrix and/or the induction of immunotolerance by using (a) one or more carriers; (b) a soluble matrix for embedding one or more components for leukocyte-stimulation and/or induction of immunotolerance; (c) one or more components for leukocyte-stimulation and/or induction of immunotolerance that are embedded in the soluble matrix. Further ingredients are coupling agents for binding the carrier with the components for leukocyte-stimulation and/or induction of immunotolerance. Typical stimulating agents are antigens, MHC antigens, cell debris, viruses, etc. Polyurethane, polystyrene, and medical metals, glasses, natural products are the carriers. As coupling agents bromocyan, agarose, silane, etc. are used; matrixes are starch, cellulose, glycogen, polyethylene glycol.

=> s l50 and matrix
L52 81 L50 AND MATRIX

=> s l52 and virus
L53 3 L52 AND VIRUS

=> dup remove l53
PROCESSING COMPLETED FOR L53
L54 3 DUP REMOVE L53 (0 DUPLICATES REMOVED)

=> d l54 1-3 cbib abs

L54 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
2007:1267457 Document No. 147:482421 Biocompatible three dimensional matrix for the immobilization of biological substances. Margraf, Stefan; Scholz, Martin (Leukocare A.-G., Germany). Eur. Pat. Appl. EP 1852443 A1 20071107, 25pp. DESIGNATED STATES: R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU. (English). CODEN: EPXXDW. APPLICATION: EP 2006-9343 20060505.

AB The present invention relates to a method of producing a solid coated carrier carrying biol. material. Furthermore, the invention relates to a solid coated carrier to which biol. material is attached and uses of the solid coated carrier for the preparation of a medical product. Moreover, the invention provides a method for the contacting, filtration or cleaning of blood, lymph or liquor cerebrospinalis of a patient, a method for the diagnosis of a disease and a diagnostic composition The method of producing a solid coated carrier carrying biol. material, comprises the steps of: (a) incubating a solid carrier with a solution comprising 0.1 to 10 % of at least one silane and subsequently removing the solution; (b) attaching the biol. material to the carrier by incubating the carrier with a buffered aqueous solution containing the biol. material and subsequently removing the aqueous solution;
and (c) incubating the carrier in an aqueous solution comprising one or more substances selected from the group consisting of albumin, hydroxyethyl-starch (HES), mannitol, sorbitol and polyethylene glycol (PEG) and subsequently removing the aqueous solution; (d) drying the carrier until the residual water content is < 20 %.

L54 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

2005:975659 Document No. 143:254039 Formulation of leukocyte-stimulation matrixes for vaccination and the determination of T-cell subtypes. Scholz, Martin (Leukocare GmbH, Germany). Eur. Pat. Appl. EP 1571204 A1 20050907, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK. (German). CODEN: EPXXDW. APPLICATION: EP 2004-5177 20040304.

AB The invention concerns leukocyte-stimulation matrix and/or the induction of immunotolerance by using (a) one or more carriers; (b) a soluble matrix for embedding one or more components for leukocyte-stimulation and/or induction of immunotolerance; (c) one or more components for leukocyte-stimulation and/or induction of immunotolerance that are embedded in the soluble matrix. Further ingredients are coupling agents for binding the carrier with the components for leukocyte-stimulation and/or induction of immunotolerance. Typical stimulating agents are antigens, MHC antigens, cell debris, viruses, etc. Polyurethane, polystyrene, and medical metals, glasses, natural products are the carriers. As coupling agents bromocyan, agarose, silane, etc. are used; matrixes are starch, cellulose, glycogen, polyethylene glycol.

L54 ANSWER 3 OF 3 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

2000:431554 The Genuine Article (R) Number: 319WJ. Cytomegalovirus-infected neuroblastoma cells exhibit augmented invasiveness mediated by beta 1 alpha 5 integrin (VLA-5). Scholz M (Reprint); Blaheta R A; Wittig B; Cinatl J; Vogel J U; Doerr H W; Cinatl J. Univ Frankfurt, Dept Thorac & Cardiovasc Surg, Inst Med Virol, Interdisciplinary Lab, Theodor Stern Kai 7, D-60590 Frankfurt, Germany (Reprint); Univ Frankfurt, Dept Thorac & Cardiovasc Surg, Inst Med Virol, Interdisciplinary Lab, D-60590 Frankfurt, Germany; Univ Frankfurt, Dept Pediat, D-60590 Frankfurt, Germany; Univ Saarland, Dept Internal Med 2, D-6650 Homburg, Germany. TISSUE ANTIGENS (MAY 2000) Vol. 55, No. 5, pp. 412-421. ISSN: 0001-2815. Publisher: MUNKSGAARD INT PUBL LTD, 35 NORRE SOGADE, PO BOX 2148, DK-1016 COPENHAGEN, DENMARK. Language: English.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Previously, experimental in vivo results showed that the productively and persistently human cytomegalovirus (HCMV)-infected neuroblastoma cell line UKF-NB-4(AD169) exhibits a more malignant phenotype than the non-infected variant UKF-NB-4. To prove the assumption that enhanced malignancy may be due to enhanced invasive potential of the infected cells we studied interactions of both lines with monolayers of cultured endothelial cells. UKF-NB-4(AD169) cells adhered to and transmigrated through endothelial monolayer to a significantly higher extent compared with UKF-NB-4. Furthermore, the adhesion of UKF-NB-4(AD169) but not of UKF-NB-4 resulted in focal disruption of the monolayer integrity which facilitates tumor cell transmigration, Blocking antibodies directed against the beta 1 integrin chain as well as beta 1 alpha 5 on the tumor cells specifically inhibited adhesion in a concentration-dependent manner. When UKF-NB-4 were pretreated with a beta 1 integrin activating antibody, focal disruption of the endothelial integrity also occurred. These findings lead us to suggest that HCMV infection activates beta 1 alpha 5 in the host neuroblastoma cell which in turn enables these cells to tightly adhere to endothelial cells. In the presence of the protease inhibitor phenantroline, beta 1 alpha 5-mediated adhesion was not impaired whereas UKF-NB-4(AD169)-mediated endothelial monolayer permeabilization was dose dependently inhibited. We conclude that human cytomegalovirus infection contributes to augmented neuroblastoma invasiveness via adhesion of activated beta 1 alpha 5 and subsequent matrix digestion by proteases.

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                  Zentralblatt
 NEWS  3  OCT 19  BEILSTEIN updated with new compounds
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 NEWS  5  NOV 19  WPIX enhanced with XML display format
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 NEWS 10  DEC 17  IMSDRUGCONF removed from database clusters and STN
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 NEWS 12  DEC 17  TOXCENTER enhanced with 2008 MeSH vocabulary in
                  MEDLINE segment
 NEWS 13  DEC 17  MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
 NEWS 14  DEC 17  CA/CAplus enhanced with new custom IPC display formats
 NEWS 15  DEC 17  STN Viewer enhanced with full-text patent content
                  from USPATOLD
 NEWS 16  JAN 02  STN pricing information for 2008 now available
 NEWS 17  JAN 16  CAS patent coverage enhanced to include exemplified
                  prophetic substances
 NEWS 18  JAN 28  USPATFULL, USPAT2, and USPATOLD enhanced with new
                  custom IPC display formats
 NEWS 19  JAN 28  MARPAT searching enhanced
 NEWS 20  JAN 28  USGENE now provides USPTO sequence data within 3 days
                  of publication
 NEWS 21  JAN 28  TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 22  JAN 28  MEDLINE and LMEDLINE reloaded with enhancements
 NEWS 23  FEB 08  STN Express, Version 8.3, now available
 NEWS 24  FEB 20  PCI now available as a replacement to DPCI
 NEWS 25  FEB 25  IFIREF reloaded with enhancements
 NEWS 26  FEB 25  IMSPRODUCT reloaded with enhancements
 NEWS 27  FEB 29  WPINDEX/WPIDS/WPIX enhanced with ECLA and current
                  U.S. National Patent Classification


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              AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

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COST IN U.S. DOLLARS   SINCE FILE   TOTAL
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FULL ESTIMATED COST   0.21   0.21

FILE 'MEDLINE' ENTERED AT 18:09:27 ON 24 MAR 2008

FILE 'EMBASE' ENTERED AT 18:09:27 ON 24 MAR 2008

FILE 'BIOSIS' ENTERED AT 18:09:27 ON 24 MAR 2008

FILE 'SCISEARCH' ENTERED AT 18:09:27 ON 24 MAR 2008

FILE 'CAPLUS' ENTERED AT 18:09:27 ON 24 MAR 2008

=> s pegylated antigen
L1   5 PEGYLATED ANTIGEN

=> dup remove l1
PROCESSING COMPLETED FOR L1
L2   5 DUP REMOVE L1 (0 DUPLICATES REMOVED)

=> d l2 1-5 cbib abs

L2   ANSWER 1 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
2007:80360 Document No.: PREV200700078411. Polyalkylene oxide-modified single
     chain polypeptides. Anonymous; Whitlow, Marc [Inventor]; Shorr, Robert G.
     L. [Inventor]; Filpula, David R. [Inventor]; Lee, Lihsyng Standford
     [Inventor]. El Sobrante, CA USA. ASSIGNEE: Enzon Inc. Patent Info.: US
     07150872 20061219. Official Gazette of the United States Patent and
     Trademark Office Patents, (DEC 19 2006)
     CODEN: OGUPE7. ISSN: 0098-1133. Language: English.
AB   The present invention relates to the chemical modification of single chain
     polypeptides by means of covalent attachment of strands of poly(ethylene
     glycol) PEG and similar poly(alkylene oxides) to single chain polypeptide
     binding molecules that have the three dimensional folding and, thus, the
     binding ability and specificity, of the variable region of an antibody.
     Such preparations of modified single chain polypeptide binding molecules
     have reduced immugenicity and antigenicity as well as having a longer
     halflife in the bloodstream as compared to the parent polypeptide. These
     beneficial properties of the modified single chain polypeptide binding
     molecules make them very useful in a variety of therapeutic applications.
     The invention also relates to multivalent antigen-binding molecules
     capable of PEGylation. Compositions of, genetic constructions for,
     methods of use, and methods for producing PEGylated
     antigen-binding proteins are disclosed.

L2 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
2006:134005 Document No.: PREV200600142959. Polyalkylene oxide-modified single chain polypeptides. Whitlow, Marc [Inventor]; Shorr, Robert G. L. [Inventor]; Filpula, David R. [Inventor]; Lee, Lihsyng Standford [Inventor]. El Sobrante, CA USA. ASSIGNEE: Enzon, Inc.. Patent Info.: US 06872393 20050329. Official Gazette of the United States Patent and Trademark Office Patents, (MAR 29 2005)
CODEN: OGUPE7. ISSN: 0098-1133. Language: English.

AB The present invention relates to the chemical modification of single chain polypeptides by means of covalent attachment of strands of poly(ethylene glycol) PEG and similar poly(alkylene oxides) to single chain polypeptide binding molecules that have the three dimensional folding and, thus, the binding ability and specificity, of the variable region of an antibody. Such preparations of modified single chain polypeptide binding molecules have reduced immugenicity and antigenicity as well as having a longer halflife in the bloodstream as compared to the parent polypeptide. These beneficial properties of the modified single chain polypeptide binding molecules make them very useful in a variety of therapeutic applications. The invention also relates to multivalent antigen-binding molecules capable of PEGylation. Compositions of, genetic constructions for, methods of use, and methods for producing PEGylated antigen-binding proteins are disclosed.

L2 ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
2005:20970 Document No.: PREV200500024171. Polyalkylene oxide-modified single chain polypeptides. Whitlow, Marc [Inventor, Reprint Author]; Shorr, Robert G. L. [Inventor]; Filpula, David R. [Inventor]; Lee, Lihsyng Stanford [Inventor]. Princeton Junction, NJ, USA. ASSIGNEE: Enzon, Inc.. Patent Info.: US 6824782 20041130. Official Gazette of the United States Patent and Trademark Office Patents, (Nov 30 2004) Vol. 1288, No. 5. http://www.uspto.gov/web/menu/patdata.html. e-file.
ISSN: 0098-1133 (ISSN print). Language: English.

AB The present invention relates to the chemical modification of single chain polypeptides by means of covalent attachment of strands of poly(ethylene glycol) PEG and similar poly(alkylene oxides) to single chain polypeptide binding molecules that have the three dimensional folding and, thus, the binding ability and specificity, of the variable region of an antibody. Such preparations of modified single chain polypeptide binding molecules have reduced immugenicity and antigenicity as well as having a longer halflife in the bloodstream as compared to the parent polypeptide. These beneficial properties of the modified single chain polypeptide binding molecules make them very useful in a variety of therapeutic applications. The invention also relates to multivalent antigen-binding molecules capable of PEGylation. Compositions of, genetic constructions for, methods of use, and methods for producing PEGylated antigen-binding proteins are disclosed.

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
2003:614179 Document No. 139:163215 Immune tolerance induced by polyethylene glycol-conjugate of protein antigen. Kodera, Yoh; Kurosawa, Masaru; Saito, Tetsuya; Mitsui, Kenichi; Matsushima, Ayako; Inada, Yuji; Nishimura, Hiroyuki (Toin Human Sci. Technol. Cent., Toin Univ. Yokohama, Japan). Tanpakushitsu Kakusan Koso, 48(11, Zokango), 1527-1533 (Japanese) 2003. CODEN: TAKKAJ. ISSN: 0039-9450. Publisher: Kyoritsu Shuppan.

AB A review on effect of chemical modification with polyethylene glycol (PEG) on protein antigenicity, induction of helper T cell (TH cell) immune tolerance by PEG-conjugated antigens, and effect of PEGylated antigens on thymic TH cells.

L2 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
1998:719295 Document No. 130:3057 Polyalkylene oxide-modified single chain

polypeptides. Whitlow, Marc; Shorr, Robert G. L.; Filpula, David R.; Lee, Lihsyng S. (Enzon, Inc., USA). PCT Int. Appl. WO 9848837 A1 19981105, 117 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-US8654 19980430. PRIORITY: US 1997-44449P 19970430; US 1997-50472P 19970623; US 1997-63074P 19971027; US 1997-67341P 19971202.

AB The present invention relates to the chemical modification of single chain polypeptides by means of covalent attachment of strands of poly(ethylene glycol) PEG and similar poly(alkylene oxides) to single chain polypeptide binding mols. that have the three dimensional folding and, thus, the binding ability and specificity, of the variable region of an antibody. Such prepns. of modified single chain polypeptide binding mols. have reduced immunogenicity and antigenicity as well as having a longer half life in the bloodstream as compared to the parent polypeptide. These beneficial properties of the modified single chain polypeptide binding mols. make them very useful in a variety of therapeutic applications. The invention also relates to multivalent antigen-binding mols. capable of PEGylation. Compns. of, genetic constructions for, methods of use, and methods for producing PEGylated antigen-binding proteins are disclosed.

```
=> s polyethylene glycol derivative
L3        2133 POLYETHYLENE GLYCOL DERIVATIVE

=> s l3 and cellulose
L4         148 L3 AND CELLULOSE

=> s l4 and starch
L5          29 L4 AND STARCH

=> s l5 and glycogen
L6           2 L5 AND GLYCOGEN

=> dup remove l6
PROCESSING COMPLETED FOR L6
L7            2 DUP REMOVE L6 (0 DUPLICATES REMOVED)

=> d l2 1-2 cbib abs
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L2 ANSWER 1 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
2007:80360 Document No.: PREV200700078411. Polyalkylene oxide-modified single chain polypeptides. Anonymous; Whitlow, Marc [Inventor]; Shorr, Robert G. L. [Inventor]; Filpula, David R. [Inventor]; Lee, Lihsyng Standford [Inventor]. El Sobrante, CA USA. ASSIGNEE: Enzon Inc. Patent Info.: US 07150872 20061219. Official Gazette of the United States Patent and Trademark Office Patents, (DEC 19 2006)
CODEN: OGUPE7. ISSN: 0098-1133. Language: English.

AB The present invention relates to the chemical modification of single chain polypeptides by means of covalent attachment of strands of poly(ethylene glycol) PEG and similar poly(alkylene oxides) to single chain polypeptide binding molecules that have the three dimensional folding and, thus, the binding ability and specificity, of the variable region of an antibody. Such preparations of modified single chain polypeptide binding molecules have reduced immugenicity and antigenicity as well as having a longer halflife in the bloodstream as compared to the parent polypeptide. These beneficial properties of the modified single chain polypeptide binding

molecules make them very useful in a variety of therapeutic applications. The invention also relates to multivalent antigen-binding molecules capable of PEGylation. Compositions of, genetic constructions for, methods of use, and methods for producing PEGylated antigen-binding proteins are disclosed.

L2 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
2006:134005 Document No.: PREV200600142959. Polyalkylene oxide-modified single chain polypeptides. Whitlow, Marc [Inventor]; Shorr, Robert G. L. [Inventor]; Filpula, David R. [Inventor]; Lee, Lihsyng Standford [Inventor]. El Sobrante, CA USA. ASSIGNEE: Enzon, Inc.. Patent Info.: US 06872393 20050329. Official Gazette of the United States Patent and Trademark Office Patents, (MAR 29 2005)
CODEN: OGUPE7. ISSN: 0098-1133. Language: English.
AB The present invention relates to the chemical modification of single chain polypeptides by means of covalent attachment of strands of poly(ethylene glycol) PEG and similar poly(alkylene oxides) to single chain polypeptide binding molecules that have the three dimensional folding and, thus, the binding ability and specificity, of the variable region of an antibody. Such preparations of modified single chain polypeptide binding molecules have reduced immugenicity and antigenicity as well as having a longer halflife in the bloodstream as compared to the parent polypeptide. These beneficial properties of the modified single chain polypeptide binding molecules make them very useful in a variety of therapeutic applications. The invention also relates to multivalent antigen-binding molecules capable of PEGylation. Compositions of, genetic constructions for, methods of use, and methods for producing PEGylated antigen-binding proteins are disclosed.

```
=> s l4 and weight ratio
L8           0 L4 AND WEIGHT RATIO

=> s l4 and weight percent
L9           0 L4 AND WEIGHT PERCENT

=> dup remove l4
PROCESSING COMPLETED FOR L4
L10        147 DUP REMOVE L4 (1 DUPLICATE REMOVED)

=> s l10 and pd<20040304
   2 FILES SEARCHED...
L11        108 L10 AND PD<20040304

=> s l11 and percent
L12          0 L11 AND PERCENT

=> d his

     (FILE 'HOME' ENTERED AT 18:09:05 ON 24 MAR 2008)

     FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS' ENTERED AT 18:09:27 ON
     24 MAR 2008
L1           5 S PEGYLATED ANTIGEN
L2           5 DUP REMOVE L1 (0 DUPLICATES REMOVED)
L3        2133 S POLYETHYLENE GLYCOL DERIVATIVE
L4         148 S L3 AND CELLULOSE
L5          29 S L4 AND STARCH
L6           2 S L5 AND GLYCOGEN
L7           2 DUP REMOVE L6 (0 DUPLICATES REMOVED)
L8           0 S L4 AND WEIGHT RATIO
L9           0 S L4 AND WEIGHT PERCENT
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L10         147 DUP REMOVE L4 (1 DUPLICATE REMOVED)
L11         108 S L10 AND PD<20040304
L12           0 S L11 AND PERCENT

=> s l4 and weight
L13          45 L4 AND WEIGHT

=> s l13 and percent
L14           0 L13 AND PERCENT

=> dup remove l13
PROCESSING COMPLETED FOR L13
L15          45 DUP REMOVE L13 (0 DUPLICATES REMOVED)

=> s l15 and ratio
L16           3 L15 AND RATIO

=> dup remove l16
PROCESSING COMPLETED FOR L16
L17           3 DUP REMOVE L16 (0 DUPLICATES REMOVED)

=> d l17 1-3 cbib abs

L17  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
1983:128003   Document No. 98:128003  Original Reference No. 98:19509a,19512a
     Wood pulp production.  Shpenzer, N. P.; Talmud, S. L.; Yun, Kh. V.;
     Ryuntyu, L. G.; Kovaleva, I. N.; Pelevin, Yu. A. (Leningrad Technological
     Institute of the Cellulose-Paper Industry, USSR).  U.S.S.R. SU 988940 A1
     19830115  From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1983,
     (2), 122.  (Russian).  CODEN: URXXAF.  APPLICATION: SU 1981-3318919
     19810721.
AB   Wood chips are cooked with a sulfite solution in the presence of an anionic
     surfactant, a mixture of Na salts of isomeric alkanesulfonic acids with
     C11-18 chain lengths in the alkyl radicals and also a surfactant based on
     poly(ethylene glycol) (I) ethers of alcs.  The degree of cooking, the
     cost, and the atmospheric of resin in the pulp are reduced while simultaneously
     the amount of reducing substances in the spent cooking liquor is increased
     by using as addnl. surfactant a cationic substance, a mixture of
     (methyldiethylamino)methyl derivs. of I ethers of alkylphenols.  The total
     consumption of anionic and cationic surfactants is 0.125-0.35% of the
     weight of the absolutely dry wood chips.  The cooking is carried out
     with the ratio of anionic and cationic surfactants equal to 4:1.

L17  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
1967:47605   Document No. 66:47605  Original Reference No. 66:9035a,9038a
     Washing compositions with reduced foaming tendency. (Marles-Kuhlmann-
     Wyandotte).  Neth. Appl. NL 6602590 19661010, 16 pp.  (Dutch).  CODEN:
     NAXXAN.  PRIORITY: US 19650407.
AB   The title compns. consist of an alkylaryl sulfonate (foaming agent) 2-20,
     a water-soluble nonionic surface-active agent (I) 2-20, a fatty acid (II)
     phosphate 0.2-5.0, and an alkaline builder, e.g. a mixture of Na silicate 8-12,
     Na2CO3 20-30, Na tripolyphosphate 35-45, and Na CM-cellulose
     0.5-2.0% by weight  The preferred I is RC6H4(OCH2CH2)nOCH2C6H5 (R =
     C6-20alkyl, n = 5-30), a conjugated polyoxyalkene III, a heterogeneous
     solubilized III, or an adduct (IV) of epoxypropane (V) and epoxyethane
     (VI) with ethylenediamine.  The preferred II is a mixture of mono, di-, and
     (or) tristearic acid (VII) and (or) di- and trilaurylic acid.  For
     example, addition of 2% by weight VII phosphate (monomer content 80%)
     and 4% by weight IV (80% by weight V, ratio of VI
     to V 4.0) to a mixture of alkyl benzenesulfonate with alkyl groups derived
     from propylene tetramer and the alkaline builder showed a synergistic
     antifoaming effect in a washing test in a Bendix washing-machine, as
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compared with addition of VII phosphate or IV only.

L17 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
1966:44507 Document No. 64:44507 Original Reference No. 64:8375h,8376a-b
Viscose filaments and staple fibers. (N. V. Onderzoekingsinstituut Research). NL 301152 19650927, 10 pp. (Unavailable). APPLICATION: NL 19631129.
AB Filaments with good skin structure are spun in a spinning bath, containing H2SO4, Na2SO4, and 3-10 weight % ZnSO4, and stretched in a warm bath containing dilute acid until the xanthation ratio is <0.030. The yarn is then cooled below 25° at pH 3.4-5.0, washed acid- and salt-free with water at <20°, and dried under tension. Thus, viscose (cellulose content 7.3%, alc. 5.5%, viscosity 140 poises) containing 1.5% (based on the weight of cellulose) polyethylene glycol of mol. weight 3000 and 1.5% of a compound of the formula RN(C2H4O)xH](C2H4O)yH (I), where RNH2 is derived from coconut oil and x + y = 12, is spun at γ = 45 and maturity 14 (Hottenroth). The spinning bath at 50° contains 4.9% H2SO4, 13% Na2SO4, 4.5% ZnSO4, 0.004% laurylpyridinium chloride, and 0.025% I. The yarn is fed from the spinning nozzle (containing 1000 openings of 60 mμ diameter) to another bath at 95°, containing 2.5% H2SO4, 1% NaSO4, and 0.5% ZnSO4, where it is stretched 100 times. The yarn with a xanthation ratio of 0.010 is fed at pH 4.0 and 14° into a centrifugal spinning box, the walls of which are wetted with water at 15°; the cake, which had a temperature of 20°, is stored for 10 hrs. at 20° and washed acid- and salt-free by pressing water at 12° through it. The yarn with a Z-twist of 110 curls/m. is separated in the wet state from the cake, stretched 10% in a water bath containing 0.3% paraffin oil, 0.3% Bu stearate, and 0.4% sulfated peanut oil, and dried under tension on a hot, rotating roller. The yarn (1650 denier) is twisted to 470 Z-curls/m. A cord consisting of 2 such yarns and one S-yarn of 470 curls/m. has a strength of 18.9 kg.

=> s cellulose
L18 551700 CELLULOSE

=> s l18 and polyethylene glycol
L19 12301 L18 AND POLYETHYLENE GLYCOL

=> s l19 and polyurethane foam
L20 29 L19 AND POLYURETHANE FOAM

=> dup remove l20
PROCESSING COMPLETED FOR L20
L21 29 DUP REMOVE L20 (0 DUPLICATES REMOVED)

=> s l21 and anhydride
L22 3 L21 AND ANHYDRIDE

=> dup remove l22
PROCESSING COMPLETED FOR L22
L23 3 DUP REMOVE L22 (0 DUPLICATES REMOVED)

=> d l23 1-3 cbib abs

L23 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
2003:511886 Document No. 139:70259 Thermal barriers with reversible enhanced thermal properties and barrier manufacturing process. Magill, Monte C.; Perry, Bernard T. (USA). U.S. Pat. Appl. Publ. US 2003124318 A1 20030703, 19 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-37864 20020102.
AB A thermal barrier comprises a first barrier layer, a second barrier layer, and a base material positioned between the first barrier layer and the

second barrier layer. The base interlayer material comprises many regions and a barrier zone separating the regions. The thermal barrier further comprises a nonencapsulated phase change material impregnating ≥1 of the regions. The barrier zone hinders migration of the phase change material in its liquid state within the base material, and the first barrier layer is bonded to the second barrier layer to enclose the base material. The thermal barrier may be used or incorporated in various products or applications where thermal management is desired. For example, the thermal barrier may be used in textiles, apparel, footwear, medical products, containers and packagings, buildings, appliances, and other products. A 32 kg/m3, 2 mm thick polyurethane foam that is 156 cm wide is heat bonded to a polyurethane film (.apprx.50 μm thick and 160 cm wide); the foam/film system is then run through a nip roller that is partially submersed in a molten phase change material to absorb into the foam cells, while a second polyurethane film is sealed to the foam to form a thermal barrier.

L23 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

2001:713444 Document No. 135:257625 Polyurethane foams prepared from polyisocyanate and various polyols. Katoot, Mohammad W.; Katoot, Ahmed M. (Kt Holdings, Llc, USA). PCT Int. Appl. WO 2001070842 A2 20010927, 81 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US8888 20010320. PRIORITY: US 2000-PV190642 20000320.

AB Polyurethane foams are formed as the reaction product of a polyol selected from a fatty acid, a glycol, a vegetable oil, a mineral oil, a carbohydrate, a syrup, or a polyol blend comprising combination thereof with a polyisocyanate in the presence of a catalyst and at least one blowing agent.

L23 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

1982:440579 Document No. 97:40579 Original Reference No. 97:6937a,6940a Broken-down organic lignin-cellulose silicate polymers. Blount, David H. (USA). U.S. US 4313857 A 19820202, 14 pp. Cont.-in-part of U.S. 4,281,110. (English). CODEN: USXXAM. APPLICATION: US 1981-257126 19810424. PRIORITY: US 1979-29202 19790412; US 1980-112290 19800115; US 1980-203730 19801103.

AB Heating lignocellulosic materials in the presence of NaOH and hydrated silica (I) at 150-220° gives an alkali metal lignocellulose silicate, which is reacted with a substituted organic compound to give an organic lignocellulose silicate, useful in preparing tough, rigid moldings, coatings, etc., or in the manufacture of polyurethane foams for sound and thermal insulators. Thus, a mixture of fir sawdust .apprx.2, I 1, and NaOH 3 parts was heated for 5-60 min at 150-220° to give Na lignocellulose silicate (II) [11132-73-3]. Treatment of 30% aqueous II solution with EtCl at 150-200° and 500-1500 psi for .apprx.30 min gave Et lignocellulose silicate, which was mixed with equal parts of PAPI 27 and polyethylene glycol (mol. weight 600) containing 2% weight triethylenediamine, 10% weight C2Cl3F3, and 2% weight Na dioctyl sulfosuccinate. The mixture began to expand in 15-45 s and formed a rigid polyurethane foam.

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=> s polyurethan foam
L24       1696 POLYURETHAN FOAM

=> s l19 and triethoxysilylpropyl succinic acid anhydride
L25          0 L19 AND TRIETHOXYSILYLPROPYL SUCCINIC ACID ANHYDRIDE

=> s "3-(triethoxysilyl)propyl)succinic)acid anhydride"
L26          0 "3-(TRIETHOXYSILYL)PROPYL)SUCCINIC)ACID ANHYDRIDE"

=> s "GENIOSIL"
L27         27 "GENIOSIL"

=> s l27 and cellulose
L28          1 L27 AND CELLULOSE

=> d l28 cbib abs

L28  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
2007:531909   Document No. 146:501894  Organosilane-crosslinked, filled polymer
     compositions for adhesives, sealants, and coatings.  Loth, Helmut;
     Schmidt, Oliver; Sumser, Markus; Beck, Horst; Lambertz, Jennifer (Henkel
     K.-G.a.A., Germany).  Ger. Offen. DE 102005054008 A1 20070516, 8pp.
     (German).  CODEN: GWXXBX.  APPLICATION: DE 2005-102005054008 20051110.
AB   The initial strength, shear strength, and adhesion are improved for silane
     crosslinked polymers having having ≥2 alkoxy- or acyloxysilane
     groups for the title uses by addition of 1-60% fillers based on highly
     dispersed silica with BET surface 35-65 m2/g.


=> s l27 and polyethylene glycol
L29          1 L27 AND POLYETHYLENE GLYCOL

=> d l29 cbib abs

L29  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
2006:1206297   Document No. 145:506644  Aqueous, storage-stable emulsion of
     α-silyl-terminated polymers, their production and use.  Hattemer,
     Erik; Unger, Lothar; Ferencz, Andreas; Bachon, Thomas; Bathelt, Daniela;
     Schmidt, Tamara; Juettner, Werner (Henkel K.-G.a.A., Germany).  Ger.
     Offen. DE 102005023050 A1 20061116, 24pp.  (German).  CODEN: GWXXBX.
     APPLICATION: DE 2005-102005023050 20050513.
AB   Containing anionic or nonionic emulsifying agents with HLB value 8 - 18 title
     emulsions with increased solid content are used for manufacture coatings,
     adhesives and sealants.  Thus, mixing 1 h at 80° under N2 1,530 g
     dehydrated at 60° and 0.6 mbar polypropylene glycol (Acclaim Polyol
     18200N), 0.3 g dibutyltin dilaurate and 25.28 g
     (isocyanatomethyl)dimethoxymethylsilane (Geniosil XL42) gave a
     copolymer having melt viscosity 4.0 Pa s at 80°.  An aqueous emulsion
     prepared by mixing 10 g of this copolymer, 0.5 g ethoxylated fatty alc.
     (Disponil A3065), 0.5 g sodium lauryl sulfate (Disponil FES77)
     (emulsifying agents) and 4.8 g water and 0.2 g HCl has solid content 70
     weight% at pH 5.8 and stable at 23° ≥ 4 mo.


=> s "GF20"
L30         15 "GF20"

=> dup remove l30
PROCESSING COMPLETED FOR L30
L31          14 DUP REMOVE L30 (1 DUPLICATE REMOVED)

=> d l31 1-14 cbib abs
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L31 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2007:1144351 Document No. 147:450437 Compositions for manufacture of transparent, tintable, formable abrasion-resistant coatings. Schneider, Andreas; Jin, Ren-Zhi; Sollberger, Mark (SDC Coatings, Inc., USA). PCT Int. Appl. WO 2007114808 A1 20071011, 72pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2006-US11957 20060331.

AB Compns. for manufacture of the title coatings contain an epoxy-functional silane and(or) a diol-functional polysiloxane and ≥1 multifunctional crosslinker with ≥1 of the silane or polysiloxane being in a mol ratio of (1-10):(1-10) to the multifunctional crosslinker and an amount of water sufficient to hydrolyze the the silane and(or) the polysiloxane. The multifunctional crosslinker is selected from carboxylic acids, carboxylic acid anhydrides, and silylated anhydrides. Optionally, the compns. contain a blocked isocyanate. A typical coating composition was prepared by mixing water 7.5, A-187 (3-glycidyloxypropyltrimethoxysilane) 15, GF20 [dihydro-3-[3-(triethoxysilyl)propyl]-2,5-furanedione] 19.3, and iso-PrOH 140 g overnight, adding 0.18 g PA-57 leveling agent and 10% propylene glycol monomethyl ether, and stirring 20 min.

L31 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2007:589278 Document No. 147:32274 Zinc oxide nanoparticles. Koch, Matthias; Jonschker, Gerhard (Merck Patent GmbH, Germany). PCT Int. Appl. WO 2007059841 A1 20070531, 46pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (German). CODEN: PIXXD2. APPLICATION: WO 2006-EP10328 20061026. PRIORITY: DE 2005-102005056622 20051125.

AB Surface-modified with silica nanoparticles ZnO having particle size 3 - 50 nm used as UV-protective colloids for polymers are prepared by solvolysis ZnO precursors in alcs., treating by silica precursor and, optionally modifying a silica coating with a modifying agent such as organo-functionalized silanes, quaternary ammonium compds., phosphonates, phosphonium and sulfonium compds. or their mixts. and optionally removing the alc. and replacing it with another organic solvent. Thus, mixing 30 min at 50° 500 mL zinc acetate hydrate solution in methanol with 42.5 mL methanolic solution KOH, adding 30 mL tetramethylorthosilicate and stirring at 50° another 30 min gave a stable, transparent dispersion having particle diameter d50 = 6 - 7 nm and d90 = 5 - 10 nm. Stirring this dispersion at 50° with an amphiphilic silane prepared by reacting triethoxysilylpropylsuccinic anhydride (Geniosil GF20) with 6-aminohexanol, drying at reduced pressure and coextruding 10 g the resulting surface-modified ZnO powder with 100 g PMMA gave a plastic plate having transmission <5% at 350 nm and >90% at 450 nm.

L31 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2006:614394 Document No. 146:19701 A comparison of two different intra-articular hyaluronan drugs and physical therapy in the management of knee osteoarthritis. Atamaz, Funda; Kirazli, Yesim; Akkoc, Yesim

(Department of Physical Medicine and Rehabilitation, Medical Faculty of Ege University, Bornova-Izmir, 35100, Turk.). Rheumatology International, 26(10), 873-878 (English) 2006. CODEN: RHINDE. ISSN: 0172-8172. Publisher: Springer GmbH.

AB The aim of this study was to compare the effects of phys. therapy agents (PTA) and two different intra-articular hyaluronan drugs (sodium hyaluronate (NaHA) and hylan G-F 20) on knee osteoarthritis (OA). The randomized, single-blind study, with 12 mo of follow-up, was performed on 80 patients diagnosed as knee OA. The patients were randomly divided into two treatment groups: patients in group 1 were given weekly intra-articular hyaluronan treatment which consisted of either hylan G-F 20 or NaHA during the first 3 wk and in the sixth month; PTA was applied to each patient in group 2 five times a week for 3 wk with a series of IR, short-wave diathermy-pulsed patterns and interferential therapy. Clin. assessments for each patient were made at 1, 3, 6, 9 and 12 mo using the following measures: spontaneous pain, pain at rest, pain at night, pain on touch, pain on movement, 15 m walking time, range of motion, short form 36 (SF-36), Western Ontario and McMaster University Osteoarthritis Index (WOMAC) global assessment. There was significant improvement in all variables measured in both groups during the follow-up except the WOMAC-stiffness and range of the motion. The improvement of pain (at night, at rest, SF-36) and SF-36 social functioning subscales was greater in the PTA group. Consequently, in the subgroup analyses, there was no difference between PTA and hylan groups for this improvement. In the comparison of two drugs, the reduction of pain on touch and WOMAC-function was greater in hylan group than that of NaHA. No serious local or systemic effects were observed following injections. Although all patients had improvement, PTA was superior to hyaluronan group for no activity-related pain and functional performance. On the other hand, this study supports the preferential use of hylan over NaHA in patients with knee OA.

L31 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

2006:44713 Document No. 145:40180 A prospective randomised controlled clinical trial comparing the efficacy of different molecular weight hyaluronan solutions in the treatment of knee osteoarthritis. Kotevoglu, Nurdan; Iyibozkurt, Pinar Cakil; Hiz, Ozcan; Toktas, Hasan; Kuran, Banu (Physical Therapy and Rehabilitation Department, Sisli Etfal Teaching Hospital, Istanbul, 81030, Turk.). Rheumatology International, 26(4), 325-330 (English) 2006. CODEN: RHINDE. ISSN: 0172-8172. Publisher: Springer GmbH.

AB Viscosupplementation consists of injecting exogenous hyaluronan (HA) into the synovial joints to restore the normal rheol. environment which deteriorates severely in osteoarthritic (OA) joints. Efficacy might be related to the rheol. properties and mol. weight (MW) of the hyaluronan prepns. This prospective, controlled, double-blind, randomized clin. trial was aimed at comparing the elastoviscous properties of a high mol. weight viscosupplement, hylan G-F 20, with that of a lower mol. weight hyaluronan product in order to determine the relationship of elastoviscosity to efficacy, alongside placebo, in the treatment of patients with knee OA. The results were analyzed as a "completers" anal. with 59 patients. Primary outcome measures included the Western Ontario and Mc Master Universities' Osteoarthritis Index (WOMAC) for pain, stiffness and function scores, and patient and physician global assessments (0-100 scale). For patient (PGA) and physician global assessments (PhGA), the 0-100 scale was used, with 100 being the worst. Follow-up assessments were made at intervals of 1, 3 and 6 mo after the first injection. Local adverse events, such as transient pain at the injection site or warm knee lasting for one night, were recorded in two patients (3%). In all groups, the WOMAC pain score exhibited a significant difference from the baseline value; neither treatment group was significantly different from the placebo group, but total pain score was significantly better than baseline for both of the HA groups at the end of 6 mo ($p < 0.05$). Improvement in

WOMAC phys. function score favored both sodium hyaluronate and hylan G-F 20 after the first month, and remained significant until the end of 6 mo ($p < 0.01$). In the placebo group, the phys. function scores became worse after the end of the 1st month; the scores at the end of 6 mo were no different from those at the beginning. The WOMAC stiffness scores of both of the hyaluronic acid groups improved with the first injection, and remained significantly better than the placebo group until the end of the survey ($p < 0.001$). All groups expressed improvement with PGA scores after the first injection. At the end of 6 mo all three groups were similar, but the treatment groups were significantly better than the placebo group ($p < 0.05$), and all were significantly better than at the beginning ($p < 0.05$). The PhGA scores were similar in all groups until after the third injection. The second group was slightly better in the controls at 1 and 3 mo, but all the groups were similar at the end of 6 mo. Although the placebo group seemed worse, it was not statistically significant. Compared with lower mol. weight HA, the higher mol. weight HA might be more efficacious in treating knee OA, but heterogeneity of previous studies limited definitive conclusions. Patients treated by injection of either of two hyaluronan prepns. showed clin. improvement for pain, though no different from the placebo group; WOMAC stiffness scores were better than placebo in the HA groups, whereas PGA scores showed improvement in all groups but HA groups were better than placebo. PhGA scores were worse in the placebo group, but not to a statistically-significant extent. The HA groups did not differ in terms of clin. efficacy.

L31 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2005:1224498 Document No. 144:17093 Comparison of the effect of Hylan G-F20 and triamcinolone on pain, function and quality of life in the local pharmacotherapy of gonarthrosis. Sterzik, Holger (Germany). No pp. given Avail. Metadata on Internet Documents, Order No. 51758 From: Metadata Internet Doc. [Ger. Diss.] 2005, (D1104-4), No pp. given (German) 2005.
AB Unavailable

L31 ANSWER 6 OF 14 MEDLINE on STN DUPLICATE 1
2003528182. PubMed ID: 12951623. [Acute local reaction to intra-articular infiltration with synvisc (Hylan GF20). About two cases]. Reaccion aguda local tras infiltracion intraarticular con Synvisc (Hylan GF 20). A proposito de dos casos. Noain E; Sancez-Villares J J; Lasanta P J; Gonzalez Arteaga F J. (Cirugia Ortopedica y Traumatologia, Hospital Garcia Orcoyen, 31200 Estella, Spain.. enoainsa@cfnavarra.es) . Anales del sistema sanitario de Navarra, (2003 May-Aug) Vol. 26, No. 2, pp. 283-5. Journal code: 9710381. ISSN: 1137-6627. Pub. country: Spain. Language: Spanish.
AB A second stage in the treatment of arthrosis following the non-steroid anti-inflammatories is formed by the so-called chondroprotectors and intraarticular viscosupplementation with hyaluronic acid, generally in the knee. Although infrequent, cases have been described of transitory inflammatory arthritis following intra-articulary administration. The main problem is differential diagnosis with a septic secondary arthritis and its consequences. This is a generally benign process with a still unknown transitory aetiology with different hypotheses, but which involves suspension of the treatment. We present two cases that resolved the sequels with different moments of appearance, the first in the three hours following infiltration, and the second four days later.

L31 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2002:572769 Document No. 138:154175 Evaluation of the tensile properties of PET before and after chemical exposure. Rush, Rhonda M. (Senior Materials Scientist, S&C Electric Company, Chicago, IL, 60626, USA). Annual Technical Conference - Society of Plastics Engineers, 60th(Vol. 2), 1626-1634 (English) 2002. CODEN: ACPED4. ISSN: 0272-5223. Publisher:

Society of Plastics Engineers.
AB The polyethylene terephthalate (PET) specimens were evaluated as molded and after various treatments. The PET polymers are known to undergo hydrolysis and thought to be sensitive to exposure to acid. The molded specimens were exposed to various chems. including hydrocarbons, oils and greases, and solns. of nitric acid. Chems. were selected because of an opportunity for them to contact PET parts during assembly or as used in our applications. The molded samples were subjected to exposure for different periods. Exposure effects were monitored using the tensile strength at break data. The comparison of tensile strengths was done by using the Property Retention Index (PRI) according to ASTM D 5870-95. Materials included: black DuPont Rynite SST 35, black and gray DuPont Rynite 545, and Ticona Celstran PET GF20-02.

L31 ANSWER 8 OF 14 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
2001347758 EMBASE Difference in degree of mucosal atrophy between elevated and depressed types of gastric epithelial tumors. Tabata H.; Fuchigami T.; Kobayashi H.; Sakai Y.; Nakanishi M.; Tomioka K.; Nakamura S.; Matsumoto T.; Fujishima M.. Dr. H. Tabata, Second Dept. of Internal Medicine, Faculty of Medicine, Kyusyu University 60, Maidasi 3-1-1 Higashi-ku, Fukuoka 8128582, Japan. tabata@momo.sonet.ne.jp. Scandinavian Journal of Gastroenterology Vol. 36, No. 11, pp. 1134-1140 2001.
Refs: 40.
ISSN: 0036-5521. CODEN: SJGRA4
Pub. Country: Norway. Language: English. Summary Language: English.
Entered STN: 20011018. Last Updated on STN: 20011018
AB Background: The significance of atrophy in the background mucosa and Helicobacter pylori infection in the morphogenesis of gastric epithelial tumors has not yet been investigated. Methods: The degree of mucosal atrophy, as determined by a histological analysis and the serum pepsinogen (PG) levels, and H. pylori status were investigated in patients with elevated adenoma (EA group; n=40), elevated early cancer of intestinal type (ECI group; n=30), depressed early cancer of intestinal type (DCI group; n=37) and depressed early cancer of diffuse type (DCD group; n=33), and the findings were then compared to those in 91 controls. Results: At all sites of the stomach, the histologic score of atrophy was higher in the EA group and in the ECI group than in the controls. In the DCI group, the histologic score of atrophy in the antrum was higher than in the controls, but no such difference in the score was found in the DCD group. The PG I/II ratios in the EA, ECI and DCI groups were significantly lower than in the controls, and the value was also different between the ECI and DCI groups. While H. pylori prevalence was higher in all groups than in the controls, a logistic regression analysis which included the grade of atrophy as a determinant revealed the infection to be an independent associated factor for the DCD group. Conclusions: The difference in the background mucosal atrophy seems to contribute to different macroscopic types in gastric epithelial tumors. This seems to be the case especially for cancer of intestinal type.

L31 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2001:668017 Document No. 136:11834 Anodic oxidation of a carbon felt electrode of an all vanadium redox-flow battery. Kim, Jong-Chul; Ryu, Cheol-Hwi; Kang, An-Soo (Department of Chemical Engineering, Myongji University, Yongin, 449-728, S. Korea). Kongop Hwahak, 12(5), 517-522 (Korean) 2001. CODEN: KOHWE9. ISSN: 1225-0112. Publisher: Korean Society of Industrial and Engineering Chemistry.
AB A vanadium redox-flow battery (VRFB) is a secondary battery used in a large scale energy storage and power supply system. The redox reactivity of vanadium ion species studied, by treating the carbon felt electrodes by anodic oxidation and measuring cyclic voltammograms. The effect of anodic oxidation on the surface chemical of carbon felt electrodes were also

investigated using the XPS (XPS). After the anodic oxidation, the surface area of GF20-3 and GF20-5 carbon felt electrodes were unchanged but the XPS and IR spectrum anal. revealed an increase in the overall surface oxygen content. Redox reaction characteristics using CV revealed that the treated electrodes were more reversible than the untreated electrodes. Through cell performance of VRFB with treated the GF20-5 electrode, energy efficiency over 84.2% was obtained, compared with 78% for the untreated electrode.

L31 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
2003:373278 Document No. 140:129177 Injection moulding of hybrid microstructures. Ziegmann, Christian; Michaeli, Walter (IKV Institute of Plastics Processing, Aachen, D-52062, Germany). Injection Moulding 2001, Collected Papers of the European Conference, 2nd, Copenhagen, Denmark, Mar. 20-21, 2001, 6/0, 6/1-6/6. Editor(s): Skov, Hroar R. Hexagon Holding ApS: Copenhagen, Den. ISBN: 87-89753-36-4 (English) 2001. CODEN: 69DWTZ.
AB Micro-injection molding is a suitable process not only for the production of microstructures but for the assembly of micro-systems as well. For that specific process, which is based on 2-component and insert technologies, an appropriate mold technol. and a handling concept was developed. The process parameters are determined by several sensoric elements, including an endoscopial device. During the investigations, the process is characterized with regard to the influence of temps., injection parameters, material combinations as well as the behavior and influence of inlay parts. Results are presented for the over-molding of cylindrical geometries, the generation of movable microstructures and the production of fluidic microstructures by lost core technol.

L31 ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
1999:383146 Document No.: PREV199900383146. The therapeutic use of the rheologic properties of hyaluronan and its derivatives. Weiss, C. [Reprint author]. Department of Orthopaedics and Rehabilitation, Mount Sinai Medical Center, Miami Beach, FL, 33140, USA. Biorheology, (1999) Vol. 36, No. 1-2, pp. 42-43. print.
Meeting Info.: 10th International Congress of Biorheology and 3rd International Conference of Clinical Hemorheology. Pecs, Hungary. July 18-22, 1999.
CODEN: BRHLAU. ISSN: 0006-355X. Language: English.

L31 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
1997:731922 Document No. 127:332511 Polarizing plate containing adhesive layers. Kimura, Yoshihiro; Kitamura, Shuichi (Nippon Synthetic Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09292523 A 19971111 Heisei, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-131349 19960426.
AB Polarizing plates consist of protective films covered on ≥1 side with polyvinyl alc.-type polarizing films (endowed with polarizability by iodine compds. or dichromatic dyes) in which adhesive layers containing (A) epoxy resin-reactive acrylic resins, (B) epoxy-reactive silanes, (C) epoxy resins, and (D) crosslinking agents are formed on ≥1 side.

L31 ANSWER 13 OF 14 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
1990:287237 Document No.: PREV199090018083; BA90:18083. IMMUNOHISTOCHEMICAL APPROACH TO REVEAL THE GROWTH POTENTIAL OF UTERINE CANCERS USING ANTI-BRDU ANTIBODY AND KI-67. YOSHINOUCHI M [Reprint author]. DEP OBSTETRICS GYNECOL, OKAYAMA UNIV MED SCH, JAPAN. Journal of Japan Society for Cancer Therapy, (1989) Vol. 24, No. 11, pp. 2513-2521.
CODEN: NGCJAK. ISSN: 0021-4671. Language: JAPANESE.
AB To reveal the growth potential of uterine cancer, the population of

S-phase and proliferating cells were examined with immunohistochemical technique using anti-BrdU antibody and Ki-67. BrdU is a thymidine analogue that is also incorporated into nuclear DNA and S-phase cells are recognized with anti-BrdU antibody. Ki-67 reacts a nuclear antigen present in proliferating cells (late GI, S, M and G2 phase). The percentage of BrdU-labeled cells (labeling index: LI) and that of cells recognized with Ki-67 (growth fraction : GF) were calculated. LI and GF were examined in 12 cervical cancers (LI: 16.0±6.0; GF : 32.2±11.2, mean±SD), 18 normal ectocervical portions (LI: 6.9±3.1; GF: 11.4±5.0), 13 endometrial cancers (LI: 15.9±5.0; GF:26.2±9.0) and 11 normal enometrial tissues (LI: 12.2±6.1; GF20.3±6.8). Indices of GF were always higher than LI in any cases. Both indices of LI and GF in malignant cases were higher than normal cases, therefore, high growth potential of uterine cancer was demonstrated. Both LI and GF of squamous cell carcinoma were higher than adenocarcinoma. In general, the values of GF were parallel to those of LI, and a regression line:Y=1.44X+3.93 (r=0.80) was obtained. Therefore, S-phase cells occupied about 60.apprx.70% of all proliferating cells. These results showed that these two parameters were useful to evaluate growth potential of uterine cancer, but calculation of GF using Ki-67 might be superior to LI using anti-BrdU antibody in terms of simplicity and rapidity. Endometrial scraping smears were examined by immunohistochemical technique using monoclonal antibody Ki-67. Ki67 positive cells were recognized in cancers and/or normal proliferative phases, on the contrary, invisible in normal secretory phases and/or postmenopausal endometrium. In these results, this method to distinguish positive cells from negative cells be useful in screening of endometrial cancers, when applied to secretory-phase or postmenopausal women. This technique is quite simple and new to detect cancer cells from the point of growth potential but not morphological features.

L31 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

1989:510957 Document No. 111:110957 Response of maize (Zea mays L.) inbred lines and hybrids to chlorsulfuron. Landi, P.; Vicari, A.; Catizone, P. (Inst. Agron., Univ. Bologna, Bologna, 40126, Italy). Weed Research, 29(4), 265-71 (English) 1989. CODEN: WEREAT. ISSN: 0043-1737.

AB Twenty inbred maize lines, raised in a growth chamber, were treated with 0 or 1 ng g-1 of chlorsulfuron which caused a variable reduction in root-length. In a second experiment, all crosses (reciprocals included) among two tolerant lines (T: Va85 and Mes44) and two susceptible lines (S: B73 and B79) were raised in a growth chamber together with the parental lines and exposed to 0, 0.5 or 1 ng g-1. The interaction of reciprocal effects + rates was not significant for all trials. The T + S hybrids showed an intermediate response between the T + T and S + S responses for root-length and dry weight Interaction (hybrids vs. parental lines) + rates was not significant for all trials. Thus, the susceptibility to chlorsulfuron is not controlled by extranuclear factors, and additive gene actions prevail. Four crosses (one T + T, two T + S and one S + S) were further investigated at nine rates from 0 to 1 ng g-1. The responses conformed the intermediate behavior of T + X hybrids, resulting in a GF20 of 0.07, 0.55 and 0.94 ng g-1 for S + S, T + S and T + T, resp. In a third experiment, the four crosses previously considered were grown in the field with parental lines and treated at five rates from 0 to 1.12 g ha-1. Effects on shoot height and dry weight were consistent with root effects found in growth chamber expts.

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---Logging off of STN---

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Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	189.56	189.77

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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